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FEDERATED MALAY STATES

REPORT FOR 1922.

(FOR THE REPORT FOR 1921 SEE STATIONERY OFFICE
PUBLICATION OF JANUARY, 1923.)

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Federated Malay States.

ANNUAL REPORT

FOR

1922

BY

W. GEORGE MAXWELL, C.M.G.,
CHIEF SECRETARY TO GOVERNMENT, FEDERATED MALAY STATES.

KUALA LUMPUR:
PRINTED AT THE FEDERATED MALAY STATES GOVERNMENT PRINTING OFFICE.
1923.

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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT

FOR THE YEAR 1922.

[*The value of the dollar is 2s. 4d.*]

[*A pikul is* $133\frac{1}{3}$ *pounds av.*]

PREFATORY NOTE.

I.—HISTORICAL.

1. The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

2. British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

3. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., ibni Idris.

SELANGOR.

4. In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca

by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

5. In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

6. This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

7. In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

8. Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

9. In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

10. The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

11. In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio

by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, Their Highnesses the Sultans of Perak, Selangor and Pahang, His Highness the Yam Tuan of Negri Sembilan, the four British Residents, the Legal Adviser, the Financial Adviser, and six unofficial members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

II.—GEOGRAPHICAL.

12. Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the back bone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

13. Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

14. Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

15. Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

III.—CLIMATE.

16. The temperature of the West Coast of the Malay Peninsula has but a small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from typical stations on the West of the Peninsula where the South-West Monsoon is broken by Sumatra show a decrease of rainfall from May to August. At Kuala Lipis, on the east of the main range, there is a general rise in rainfall from February until May, succeeded in some years by a distinct drop in July and August: there is a further rise culminating in October and November, followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In

the mountains, the rainfall is very high, the average yearly rainfall at "The Cottage" (Maxwell's Hill) above Taiping from 1912-1919 being 258 inches. At Jelebu in Negri Sembilan, the driest station where records were kept, the average for 1905-1919 was 60 inches. The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100° has never been recorded in the shade. The nights are cool. On the highest mountains, the temperature has been known to fall at nights to 46° Fahrenheit. In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally, they are of short duration and occur during the night.

IV.—STATISTICS.

17. The return, which forms the appendix to this report, shows for every year from 1889 onwards particulars of revenue, expenditure, imports, exports, duty on tin, duty on rubber, land revenue, railway receipts and population.

V.—POPULATION.

18. The census taken on the 24th April, 1921, shows that the population of the Federated Malay States was then 1,324,890, having increased since 1911 by 27.7 per cent. Of this population 853,528 are males and 471,362 females, the rate of increase since 1911 having been 17.7 and 51.1 respectively.

The Malay population rose from 420,840 in 1911 to 510,821 in 1921, an increase of 21.3 per cent. The rates of increase of the Malay population were 20.1 per cent. in Perak, 41.3 per cent. in Selangor, 11.3 per cent. in Negri Sembilan, and 17.3 per cent. in Pahang. The very high rate of increase in Selangor, where, in the Kuala Selangor district, the Malay population practically doubled since 1911, is due to the influx of foreign Malays, who have settled in the Coast districts to plant rubber.

The Chinese population of the Federated Malay States was 494,548 or only 61,304 more than in 1911. Practically the whole of this increase was in Chinese females, who now number 351 to 1,000 males as compared with 188 in 1911, and the lessening disparity between the sexes among the Chinese is gratifying as indicating a general tendency towards their permanent settlement in the Federated Malay States.

The rise in the Indian population was a marked feature of the 1921 census. In 1901, 58,386 persons of Indian nationality were enumerated; ten years later the number had risen to 172,465, the increase synchronising with the early development of the rubber planting industry, while in 1921 Indians in the Federated Malay States totalled 305,219. The percentages of increase since 1911 were 77.2 in Perak, 78.9 in Selangor, 84.4 in Negri Sembilan, and 31.4 in Pahang. More than four-fifths of the Indians in the Federated Malay States are Tamils.

The European population of the Federated Malay States rose from 3,284 in 1911 to 5,686 in 1921, of whom 93.2 per cent. are of British nationality. The most satisfactory feature of the census is that all the statistics, of sex, of marriage, of age and of birth place, show that the immigrant races, who have done so much to develop the resources of the

Federated Malay States, are ceasing to look upon these States as a place of temporary sojourn and are tending more and more to make their permanent home here.

VI.—RAILWAYS.

19. The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, and Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (120 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines; the West Coast line runs North-North-West through Negri Sembilan, Selangor, and Perak, thence enters Province Wellesley, passing Prai—the port opposite Penang Harbour—about 472 miles from Johore Bahru, and thence proceeds through the Unfederated States of Kedah and Perlis, to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Siamese State Railways was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

20. The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat. It is completed and opened for traffic as far as Padang Tungku, 6 miles beyond Kuala Lipis, the capital of Pahang, and 147 miles from Gemas, whilst at the end of 1922 the permanent way had been laid as far as the 168th mile. The distance from railhead in Kelantan to railhead in Pahang is 107 miles. A section of 33 miles in Kelantan, between Riverside, near Tanah Merah and Tumpat on the East Coast is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. An extension has been made from Pasir Mas in Kelantan and runs in a westerly direction for 12 miles to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Siamese State Railways commenced on November 1st, 1921.

21. Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang considerable progress has been made with the construction of deep water wharves, and it is hoped to complete their construction early in 1923. A causeway carrying two lines of rails and a roadway is being built across the Johore Strait to connect the Island of Singapore with the Peninsula and will probably be opened for single line railway traffic before the end of 1923.

22. The total length of line now open to traffic under the Federated Malay States Railway Administration is 966 miles. The line is of metre gauge. On the mail trains on the West Coast main line there are sleeping saloons and restaurant cars. There are 233 permanent stations and 19 flag stations. The expenditure on capital account (including lines not open for traffic) was $186,791,872 up to 31st December, 1922, of which $173,983,372 was met from current revenue, and $12,808,500 from loan account.

ANNUAL REPORT, 1922.

I.—FINANCIAL.

BUDGET FOR 1922.

23. The estimates of revenue and expenditure for the year 1922 provided for a revenue of $59,818,670 and an expenditure (excluding capital expenditure, which was mainly to be met from loan moneys) of $62,151,147.

ACTUAL REVENUE AND EXPENDITURE.

24. The actual revenue for the year was $52,494,110, and the expenditure was $49,811,007. An estimated deficit of $2,332,477 was thus converted into a surplus of $2,683,103. The principal deficiencies as compared with the estimate were $4,045,956 under Customs, $3,433,676 under Railways The sales of the Penang Hill Railway and the Teluk Ayer Godowns, which were anticipated when the Estimates were passed, and in respect of which a revenue provision of $2,500,000 was made, were not effected during the year. The largest excess was $2,439,958 under "Reimbursements", and was mainly due to the repayment by the Admiralty of $1,539,249 in respect of the cost of H.M.S. "Malaya". The largest savings in expenditure were: Railways, $5,281,084; Medical, $1,579,017; Public Works, $1,430,178; Posts and Telegraphs, $603,054.

THE PUBLIC DEBT.

25. In my report for 1921, I mentioned the issue in December, 1921, of the first instalment (£5,155,000) of the Straits Settlements Loan of £10,000,000 at 97, bearing interest at 6 per cent. The second instalment of £4,200,000 was floated in May, 1922, at 95, bearing interest at 4½ per cent. After deducting expenses of issue, the proceeds of these two instalments amounted to $74,297,549. Of this sum, $15,773,648 was spent upon Railway and other works, and the unexpended balance on the 31st December, 1922, was $58,523,901. The debt to the Colony standing at $18,788,312 on the 31st December, 1921, on the "Rice Account" was reduced to $5,261,432 on the 31st December, 1922.

THE LOAN TO SIAM.

26. Further instalments amounting to £450,000 were paid to Siam during the year on account of the Railway Loan, making a total on the 31st December, 1922, of £4,630,000. The Siamese Government has decided not to ask for the instalment of £120,000, which would have brought the total up to the £4,750,000 originally contemplated. This loan is repayable by 26 annual instalments commencing on 1st January, 1924.

LOANS TO UNFEDERATED STATES AND BRUNEI.

27. The State of Kedah reduced its debt to the Federated Malay States by $1,120,953, and now owes only $1,500,000. The total loans to Unfederated States and to Brunei amount to $6,009,429.

SURPLUS.

28. The surplus on the 31st December, 1921, was $21,832,715. As the revenue for the year exceeded the expenditure by $2,683,103, the surplus was increased to $24,515,818 on the 31st December, 1922. The statement immediately following shows that this surplus is not represented by cash.

ASSETS AND LIABILITIES.

29. The following statement shows the assets and liabilities on the 31st December, 1922:

		$	c.
Capital Account (Straits Settlements) Sterling Loan Balance at credit thereof (*a*)		58,523,901	48
Composition Stamp Duty Fund 4½ per cent. Loan		309,986	79
Indian Agency Account		114,163	75
Due to Straits Settlements a/c Johore Causeway		193,973	22
Due to Johore a/c Johore Causeway		217,740	92
Due to other Governments—			
Kelantan... ...	$ 1,272.90		
Straits Settlements	43,954.18		
		45,227	08
Sundry Outstanding Accounts ...		168,021	31
Family Remittances		4,863	49
Bentong Tailings Retention Scheme		11,444	10
Deposits—			
Courts	$158,633.37		
Forest	53,166.30		
Land	170,033.19		
Postal	87,973.02		
Miscellaneous ...	366,378.47		
		836,184	35
Sundry Funds—			
Bailey Fund ...	$ 938.25		
Police Fine and Reward Fund...	30,703.94		
Public Officers' Guarantee Fund	218,685.33		
Red Cross Fund ..	160,718.19		
Miscellaneous ..	31,865.64		
		442,911	35
Straits Settlements Government Rice Control		5,261,432	35
War Savings Certificates, 1924-1927		375,511	71
Straits Settlements Government 7 per cent. Loan, 1926		15,000,000	00
Suspense		18,060	49
Surplus		24,515,817	91
		106,039,240	30

		$	c.
Cash in Treasuries and Banks as per distribution statement		5,278,394	91
Cash with Agencies—			
Crown Agents	$ 85,947.69		
F.M.S. & S.S. Joint a/c, India	203,933.87		
Malay States Information Agency	17,153.50		
Penang	11,938.79		
Singapore	1,281,710.80		
		1,600,684	65
Cash in Transit		266,653	74
Advances at call and other temporary investments by Crown Agents ...		20,240,742	90
Composition Stamp Duty Fund 4½ per cent. Loan with Crown Agents ...		309,986	79
Ceylon Agency Account		10,901	83
Due by other Governments—			
Brunei	$ 1,838.46		
Ceylon	277.72		
India	4,552.83		
Johore	2,846.95		
Kedah	105,339.22		
Perlis	304.90		
Trengganu	3,150.22		
		118,310	30
Straits Settlements Government War Service Land Grant Scheme		2,828	55
Sundry Outstanding Accounts		16,430	55
Family Remittances		750	03
Investments: (Surplus Funds) (at cost)—			
S.S. Municipal Debentures	$1,248,050.00		
Less Reserve for depreciation...	213,837.95		
		1,034,212	05
Investments: (Specific Funds) (at cost)—			
Bailey Fund	$ 938.25		
Police Reward Fund ...	29,908.75		
Public Officers' Guarantee Fund	125,148.02		
Red Cross Fund ...	149,555.36		
		305,550	38
Investments War Savings Certificates (at cost)...		375,511	71
Loans—			
Siamese Government (*b*)	$39,685,714.30		
Native States and Brunei	6,009,428.57		
Planters	3,431,658.20		
War Service Land Grant Scheme	700,897.85		
Miscellaneous	1,463,016.06		
		51,290 714	98
Advances		361,291	46
Imprests		68,571	56
Stores and Materials—Railways ...		4,703,520	42
" " Post Office ...		12,459	97
Stores and Furniture Account, P.W.D. ...		70,291	16
Sundry Assets		12,508	82
Museum Natural Products Accounts ...		1,000	00
Tin Purchases (at cost)		18,839,045	70
Inter-Treasury Accounts		605,856	89
Suspense		13,020	95
		106,039,240	30

NOTE:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed appears on the credit side of the Capital Account (*vide* V). The expenses of issue of the loan and expenditure on works authorized to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of revenue.

(*b*) Repayable by 26 yearly instalments commencing from 1st January, 1924.

STERLING LOAN CAPITAL ACCOUNT.

30. A statement of the sterling loan capital account is published as an appendix to this report.

II.—TRADE. CUSTOMS AND SHIPPING.

COMPANIES.

31. During the year, 20 local companies with a total nominal capital of $3,708,700 were incorporated and registered as compared with 30 companies ($4,988,000) in 1921, and 54 ($38,934,928) in 1920. Eleven companies went into liquidation, and 16 were struck off the register as being defunct. During the year there was appointed, under the Bankruptcy Enactment, an Official Assignee, who is, ex-officio, an Official eceiver under the Companies Enactment.

TRADE.

32. The aggregate value of trade for the year, including re-exports, was $219,252,124 compared with $238,497,982 in 1921, a decrease of nearly 8 per cent. The falling off is due to the great drop in the *values* of imports, of which the *quantities* showed but little decrease. On the other hand, increased values of exports almost made good the loss. The distribution per head of population was £19. The values of imports and exports of merchandize (excluding re-exports and bullion) for the last five years are as follows:

	Imports.	Exports.	Trade balance.
1918 ...	$ 74,750,746 ...	$223,066,282 ...	$148,315,536
1919 ...	118,854,965 ...	279,135,105 ...	180,280,140
1920 ...	170,522,123 ...	288,715,698 ...	118,193,575
1921 ...	102,914,877 ..	129,463,762 ...	26,548,885
1922 ...	78,666,032 ...	135,116,634 ...	56,450,602

The third column in the above statement is a clear indication of the financial strength of the country, even at a time of acute depression.

DISTRIBUTION OF TRADE.

33. The distribution of trade, in imports and exports, was as follows: Singapore 41.14 per cent. and 40.01 per cent.; Penang 22.42 per cent. and 39.12 per cent.; United Kingdom 15.86 per cent. and 8.56 per cent.; foreign countries 10.95 per cent. and 8.23 per cent.; British Colonies, etc., 9.63 per cent. and 11.82 per cent.

34. Imports from the United Kingdom have fallen from 25.82 per cent. in 1921. Exports to Singapore have fallen from 60.28 per cent. in 1921. Exports to Penang have increased from 23.91 per cent. Direct exports to foreign countries have increased from 1.95 per cent.

REVENUE FROM CUSTOMS, ETC.

35. The revenue from customs, excise and the opium monopoly yielded $22,217,070, an increase of $2,108,989. Import duties produced $4,330,030, an increase of $1,135,627. Export duties realized $6,522,541, an increase of $240,434. Excise duty yielded $476,209, an increase of $126,979.

OPIUM.

36. Sales of chandu (prepared opium) again showed a decrease, falling from 1,577,180 tahils in 1920, and 989,168 tahils in 1921, to 850,267 tahils in 1922. There was no change in the selling price.

SHIPPING.

37. The number of ocean-going steamers which called at Port Swettenham was 340 with a tonnage of 1,317,721 against 294 and a tonnage of 1,178,803 in 1921. The clearances of local steamers were 659 with a tonnage of 327,386 against 667 and a tonnage of 307,302 in the preceding year.

III.—LANDS AND SURVEY.

AREA UNDER TITLE.

38. There was at the end of the year in private occupation about 2,171,575 acres under agricultural titles, and about 215,139 acres under mining titles.

39. It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 13.50 per cent. is land in private occupation, 13.01 per cent. is forest reserve, and 73.49 per cent. is still State land. Much of the State land has no road or railway access. In the upper reaches of the Perak and Pahang rivers, there are still great areas of almost unexplored forest. Of the State land and forest reserve, 10,475 square miles are above the 500 feet elevation, and of little value for agriculture, owing to the steepness of the ground.

LAND REVENUE.

40. The land revenue (including $371,446 from land sales) amounted to $3,731,041 as compared with $3,568,490 (including $286,615 from land sales) in 1920.

SURVEY DEPARTMENT.

41. The total cost of the Survey Department (after deducting reimbursements by the Straits Settlements Government and the Singapore Improvement Trust) was $1,405,958. Of this total cost, $61,970 was incurred by the Trigonometrical Branch, and $29,297 by the Topographical Branch. The Central Drawing Office and Photo-Litho. Section cost $97,801 and produced a revenue of $22,317 from sale of maps, plans, etc. The Instrument-repairing Section (doing most valuable work, and saving the Government a large sum of money annually) cost $17,338 and produced a revenue of $1,857 from small works performed for the public and other departments. The Revenue Survey Branch cost $1,098,803 (by far the largest share of the expenditure) and produced, as revenue in survey fees, the comparatively small sum of $119,424. The cost of the survey of an average holding is so disproportionate to the survey fees that the Government decided during the year to increase the scale of fees.

TRIGONOMETRICAL SURVEY.

42. Standard traverses in Perak, a reconnaissance survey in Kuantan, and a survey of the proposed reserve at Fraser's Hill were the principal works of the year.

TOPOGRAPHICAL.

43. There is a growing demand for topographical work in connection with many departments—for engineering purposes, anti-malarial works, municipal schemes, town improvements and town-planning. The work is of a very high standard, and remarkably cheap for the type of country. The junior staff is almost entirely Malay; and the Surveyor-General reports that the work of this branch is a very fine object lesson of what can be done by Malay and other Asiatic youths, when well trained.

REVENUE SURVEY.

44. The Revenue Survey Branch surveyed 15,823 lots, comprising 82,535 acres, besides 1,517 town lots and sub-divisions during the year.

PHOTO-LITHO. WORK.

45. It was due to the existence of the Photo-Litho. Branch that the Government was able to introduce the scheme of rubber restriction at such short notice. Between the middle and end of October, six denominations of coupons were designed, and one and a half million coupons printed and distributed for issue to small-holders. The thanks of the Government have been expressed to the department for the invaluable assistance rendered by it in this connection.

IV.—GEOLOGY AND MINING.

GEOLOGICAL SURVEY.

46. The geological survey of the Federated Malay States is now complete, except for a part of the Upper Perak district and a part of the Pekan district. In Upper Perak, the unsurveyed area comprises part of the main range, which can most easily be approached from Kelantan, and the remote Tiang Valley to which access is difficult and expensive. The survey of the Pekan district will be completed as soon as an officer can be sent there.

EXPORT OF TIN.

47. The weight of tin-ore, reduced to a metallic basis, and of block tin, exported during the year was 35,286 tons as compared with 34,490 tons in 1921 and 34,935 tons in 1920. The export of tin-ore represents about 83.3 per cent. of the total. The export duty (in millions of dollars) was $5.97 in 1922, $6.15 in 1921 and $12.2 in 1920.

PRICE OF TIN.

48. The year opened with the price at $85.25 per pikul of metallic tin. A rapid decline was experienced until the 2nd of March when the price stood at $71.75. Thereafter an improvement took place which was continued throughout the remainder of the year. The highest price during the year, viz., $93.62, was reached on the 8th of November and the year closed with the price at $91.75 and a rising market.

FLUCTUATIONS IN PRICE OF TIN.

49. The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

—	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	$	$	$	$	$	$	$
Highest	97.50	140.00	182.50	166.00	212.00	115.00	93.62
Average	87.53	108.74	150.62	120.68	150.67	85.04	80.64
Lowest	77.25	85.00	117.50	100.00	90.00	72.00	71.75
Fluctuation	20.25	55.00	65.00	66.00	122.00	43.00	21.87

50. A remarkable improvement in the World's consumption of tin was witnessed during the year, more especially in America. It is estimated that the whole of the World's output, which closely approximated the normal, was consumed, in addition to a considerable quantity of held up stocks. That the price did not respond to a figure more in keeping with the improved outlook was probably due to the fact that during the greater part of the year the market was depressed by the fear of liquidations on a large scale of the stocks held by the parties to the "Bandoeng Agreement."

LABOUR.

51. The labour force engaged in tin mining (including *dulang* pass holders) was 94,948 at the end of the year. The figures for the preceding three years were 1921—99,757, 1920—102,424 and 1919—128,660. The totals do not include labour employed on the extraction and transport of firewood.

TUNGSTEN.

52. The export of tungsten ores—wolfram and scheelite—was as follows: wolfram 94.7 tons, scheelite .3 tons. During the previous year 55 tons of wolfram were exported and no scheelite. These figures do not include 51 tons of tungsten ores imported for treatment and subsequently re-exported.

GOLD.

53. The production of gold from the Raub Gold Mine—the only gold mine in the Federated Malay States—was 12,929 ounces. During 1921 the production was 14,430 ounces. Alluvial native workings in various localities produced 1,224 ounces.

COAL.

54. The production of coal from the Malayan Collieries, Limited, Selangor, showed a slight decrease during the year. The output being 281,828 tons against 299,351 tons in 1921. The Government Railways were the largest consumers and took 54 per cent.; the mines took 25 per cent. and other local consumers 2 per cent. 12 per cent. was exported and 6 per cent. consumed at the Collieries. The hydraulic stowage system has been extended, and is proving most satisfactory.

CLAY.

55. The Malayan China Clay and Pottery Company, Limited, were devoting most of their attention at the end of the year to the production of latex cups for which there is a large demand. Machinery for making all kinds of pottery was being installed at the end of the year and production should begin shortly.

V.—FORESTRY.

EXPLORATION.

56. Excellent progress was made with exploration, and the exactness of the information obtained will, in the near future, enable the department to make a profit far exceeding the expenditure incurred. About 750 square miles were examined, and it is probable that 600 square miles will be reserved. The object of the work is to ascertain, on the one hand, what areas should be reserved, and, on the other hand, what areas may be freely alienated by Government for other purposes.

RESERVES.

57. The big addition (612.75 square miles) made to the forest reserves in 1921 was, not unnaturally, followed by a lean year. The new reserves of 1922 cover 126.5 square miles; and the total area of forest reserve is now 3,651.8 square miles, representing 13.1 per cent. of the total area of the Federated Malay States.

EXPLOITATION.

58. The output of timber fell to about two-thirds that of 1921, and the output of fuel fell nearly 10 per cent. In spite of enhanced royalties (which were imposed because the former scale of royalty no longer represented a fair proportion to the value of the material) both timber and fuel were cheaper at the end of the year than they had been for many years.

MINOR FOREST INDUSTRIES.

59. In my annual report for last year, I laid stress upon the importance of fostering the trade in the minor forest products. The department is attempting to improve the damar industry; and, as the result of Government intervention in Negri Sembilan, the organization of the actual collection of damar is comparatively better than it has ever been, the output has increased, and the product is admittedly far superior to anything that has ever been seen in Singapore. The (Malay) damar-collectors get a fairer wage than in the past, and may in time perhaps organize themselves into co-operative societies. Malayan damar is for the first time appearing under that name in the European and Malayan markets, and definite grades will shortly be established. The Malay States Information Agency is rendering valuable assistance, and will supply commercial samples to enquirers. The Forest Department hopes to organize the rattan industry at an early date.

60. Good progress was made with the systematic study and classification of the forest products. The first important step was completed with the publication at the end of 1921 of "Commercial Woods of the Malay Peninsula", and the second was marked at the opening of the Malaya-Borneo Exhibition by the publication of the companion volume "Minor Forest Products of the Malay Peninsula", both by Dr. F. W. Foxworthy. Particular products are now being studied in greater detail, sometimes in collaboration with the scientists of other departments. Timber durability tests were continued, and arrangements have been made for a series of experiments in the seasoning of timber by natural means. Useful information is now being obtained as to the rate of growth of some of our most important timber trees, and systematic work has been begun on the sylviculture of the gutta-percha tree. The most important piece of work in view is a comprehensive manual of the timber trees of the Peninsula. RESEARCH.

61. The revenue of the department, which had been $984,100 in 1921, fell to $888,115 as the result of the temporary depression of the timber industry, and the fall in the price of gutta-percha. The expenditure which had been $818,813 in 1921 was, by rigid economy, brought down to $720,629. By the nature of things, forest protection and forest research work do not yield immediate results in form of annual revenue. We are content to leave it to our successors to reap where we are sowing. FINANCIAL.

VI.—AGRICULTURE.

62. At the beginning of the year, in a total establishment of 38 European Officers, three appointments were vacant. During the year two appointments were filled. It was decided to suspend three appointments temporarily. STAFF.

63. The price of "Standard Rubber Sheet", which had been at 37½ cents per pound in January sagged slowly down to 23 cents in September. In October with the news that "restriction" would be imposed by legislation, it rose almost at once, to 41 cents; and at the end of the year it was 48½ cents. PRICE OF RUBBER.

64. Interesting figures of the exports of rubber from the Federated Malay States over a period of years will be found in the statement printed at the end of this report. EXPORTS OF RUBBER.

65. "Saved" was the feeling of everyone interested in the rubber planting industry, when, on the 12th October, it was publicly announced that the Secretary of State for the Colonies had approved the recommendations of the committee which he had appointed in London under the Chairmanship of Sir James Stevenson, G.C.M.G., and that legislation was to be introduced in order to impose restriction of the export of rubber. A special meeting of the Federal Council was held on the 24th October, and "The Export of Rubber (Restriction) Enactment, 1922," was passed unanimously. The necessary administrative machinery was created, and put into operation, with all possible rapidity. Some idea of the organization will be obtained from the fact that, in all, there are in the Federated Malay States about 340,000 agricultural holdings, and that rubber *in tapping* is grown on about 140,000 of them. Card indexes, based upon the recently completed census of rubber areas, were prepared by the District Officers in respect of all small holdings (areas not exceeding "RESTRICTION."

25 acres), and coupons were thereupon issued to each small-holder for the restricted quantity allowed to him in respect of his holding. Licences to export were issued to about 3,000 holdings of areas between 25 acres and 200 acres, and to about 800 properties exceeding 200 acres.

RUBBER DISEASE.

66. Rubber diseases are generally considered as "Stem", "Bark" and "Root" diseases. In the first category, "pink disease" is the most prevalent, but does not call for special comment. Of bark diseases, "mouldy rot" is the most important. A special field staff, engaged in 1921, was employed in Negri Sembilan, mainly amongst the small holdings, until the end of November, 1922, when it was decided that their work had had its full educative effect, and that control work could be safely left to the normal inspecting staff. "Black stripe", another bark disease, has given comparatively little trouble; and "brown bast", though less common than it formerly was on well managed estates, is still very prevalent on small holdings. Of root diseases, "fomes", "wet rot", "dry rot", and "brown root disease" are the most important. The Agricultural Department emphasizes the grave danger of "Root Diseases", and has reason to believe that many of the properties with old plantations will lose large areas as the result of neglect.

NEW USES FOR RUBBER.

67. The Government, in connection with the current estimates for the current year, renewed its grant of £3,000 ($24,814) to the Rubber Growers' Association towards its propaganda work.

COCONUTS.

68. The price of copra declined gradually throughout the year from $11 to $9 per pikul. Even at this price, a well managed coconut property yields a fair profit.

PADI.

69. The Krian padi crop was excellent whilst growing, and showed promise of producing a "bumper" crop; but the actual yield was reduced by wet weather at harvest time. A prolonged drought at the beginning was the real cause of the trouble, for it meant late planting, and in consequence a late harvest. There was remarkable freedom from pests other than rats. During the season, the Agricultural Department tested 120 pure strains of padi, representing six varieties, for yielding ability, at the Titi Serong Experimental Station. Comparison with padi grown from unselected seed demonstrates that the mean yield of the pure strains is 20 per cent. higher than the mean yield of unselected seed. The Malays have already learnt the value of the selected strains, and are eager to obtain and grow them.

"ARGHAN."

70. The Arghan Company is growing a fibre plant near Teluk Anson. It is known as "arghan"; and botanists are of opinion that it is identical with the well-known Columbian Pita (Ananas macrodontes?). The Company has been unfortunate. It was given land at Rompin (Pahang), and surrendered it as the land was unsuitable. It was then given land near Teluk Anson, and has recently been compelled to surrender it also, for the same reason. The Company is now seeking for land elsewhere. There are less than 7,000 plants in the country, and they are small, and immature. The nurseries, in which they are kept, cover only half an acre.

OTHER CROPS.

71. Work at the Government Experimental Station at Serdang has shewn that long-staple cotton for good average quality can be grown in Malaya with a fair degree of success provided that due attention is given to

cultivation, time of sowing and pest control. Kapok deserves more attention than it has received: though the trees grow freely everywhere, the floss is not collected for sale; and the country imports large quantities from Java and Sumatra. Roselle is being grown on one estate, on a considerable scale with profit. There is now a definite market for the fibre. Groundnuts may prove to be a good crop for rotation with roselle. At present, several million dollars worth of groundnut oil are imported annually.

AREA UNDER CULTIVATION.

72. The area under different forms of cultivation is as follows:

State.	Padi.	Coconuts.	Rubber.	Kampong fruit.	Total.
Perak	109,589	89,662	409,415	146,605	755,271
Selangor	20,048	78,680	417,737	7,285	523,750
Negri Sembilan	30,691	10,468	279,660	27,352	348,171
Pahang	30,266	14,446	121,849	50,153	216,714
	190,594	193,256	1,228,661	231,395	1,843,906

LABOUR.

73. Returns of labour, under section 113 of the Labour Code, from 1,052 estates showed 130,190 Madras Indians, 27,829 Chinese, 4,922 Javanese and 4,318 of other nationalities. The corresponding figures for 1921 had been 121,644, 25,712, 5,732, 3,253. All labour, except Javanese, is free. Labourers, though many—especially from India—have their passages paid, arrive in the country free from all debt, and are at liberty to leave their employment at any time upon giving a month's notice. It is, in fact, illegal for an Indian labourer to enter into a written contract to serve as a labourer. The number of Javanese with contracts of service under "The Netherlands Indian Labourers Protection Enactment, 1909", is small: only 100 contracts were registered during the year.

VII.—LEGISLATION.

FEDERAL ENACTMENTS.

74. In all 30 Enactments, some of which are of considerable importance, were passed in 1922. The laws relating to "Mental Disorders", "Midwives", "Rubber Restriction" and "Co-operative Societies" are referred to elsewhere in this report. Provision was made during the year for the reciprocal enforcement of judgments of the Supreme Court and of superior Courts in the United Kingdom or in any agreeing Dominion or Colony, and the system will be brought into force upon the passing of the requisite order in Council. An amendment to the Stamp Enactments has substituted the more modern estate duty for the death duty hitherto in force, the incidence of which resembled the old probate duty; and the law regarding bills of sale has been re-enacted, and assimilated in some degree to that in force in the Colony. The law relating to the acquisition of land has been re-enacted with a view to simplifying procedure and obtaining a mere satisfactory basis for compensation; and an Enactment to provide for a valuation of land has been passed. A valuation, when made, is used as a basis for rating, for death duties, and for compensation upon acquisition; and the system, while new to these States, is understood to have been a great success in the Australian and other Colonies. Other legislation relating to land included the federalisation of the existing Irrigation Areas Enactments, and the re-enactment of the law relating to the control of silt in order to enable the powers conferred thereby to be exercised by a District Officer.

75. Legislation was passed to impose restrictions upon aliens and to regulate the entrance and departure of passengers arriving in the country by ship or train, the Enactments following Colonial models; and a law, based on the English Acts, was passed for the protection of official secrets. The remaining Enactments amended the law in various ways, but do not call for any special comment.

VIII.—POLICE.

POLICE.

76. The force is distributed through 181 police stations. The scale of salary attracts, and retains, men of good class; and the force will no longer suffer from the disadvantage (under which it laboured in the past) of losing most of its men as soon as they had completed their first engagement. The improvement may be seen in the return of breaches of discipline which were .61 per man, as compared with .93 in 1921 and 1.23 in 1920. There was an improvement in the general health of the force. The expenditure of the department was $2,926,303, and its revenue was $218,817.

CRIME.

77. The decrease in crime continued. Doubtless it had some connection with the general depression. The number of offences of all kinds, reported or suspected, was 55,162 in 1922, as compared with 60,207 in 1921 and 70,152 in 1920. The decreases in gang-robbery (from 203 cases to 83) and in robbery (from 206 to 123) were marked. House-breaking (from 117 cases to 207) increased however. Good work (merely recorded by the police as "fortunate") broke up several organised bands of gang-robbers, and there was better co-operation between the various investigating officers.

IX.—PRISONS.

78. There are seven prisons. On the 1st January, 1922, there were 1,484 prisoners; during the year 8,637 were admitted; and 1,507 remained at the close of the year. The daily average figures were: Civil Prison, 179; short-sentence and revenue grade, 741; long sentence and condemned, 579. Eleven executions were carried out. Two prisoners escaped. Three prisoners committed suicide. The daily average of sick was 3.12 per cent. as compared with 4.10 in 1920. There were 35 deaths, of which 3 were from malaria, 1 from beri-beri, 4 from dysentery, 5 from phthisis, 1 from pneumonia and 21 from "other causes", of which debility may be presumed to be the cause or predisposing factor.

79. The total expenditure of all the prisons was $452,792. The daily average of 1,499 prisoners was maintained at a nett cost of $422,853 (the prison revenue being deducted), giving an annual cost per head of $282. The annual cost in 1921 had been $304, and in 1920 as much as $376.

X.—MEDICAL.

(i).—VITAL STATISTICS.

STATISTICS.

80. The estimated population at the end of June, 1922, was 1,360,876. There were 34,906 births and 35,028 deaths: the rates being 25.65 and 25.74 per mille respectively. The death-rate is the lowest recorded for twelve years. The death-rate of the four principal towns (Kuala Lumpur, Ipoh, Taiping and Seremban) is too high. There were 5,963 deaths of children under one year of age, being an infantile mortality-rate of 170.83 per mille.

(ii).—PUBLIC HEALTH.

81. As usual, malaria heads the list as the most important cause of sickness and deaths. The number of deaths recorded was 15,570 (11.44 per mille). The figures for 1921 and 1920 had been 17,168 (13.16 p.m.) and 20,595 (15.24 p.m.). The Malaria Advisory Board met regularly throughout the year. The Mosquito Destruction Boards have done excellent work. The Senior Health Officer records his opinion that their success is beyond question, and that, by arousing public interest, they have paved the way to real progress in anti-malarial work. MALARIA.

82. The public, though slow to undergo indoor hospital treatment for venereal diseases, is keenly appreciative of the facilities now afforded to outdoor patients. Injections of novarseno-benzol were given to 19,690 persons. Comparatively few cases of gonorrhœa come for treatment. VENEREAL DISEASES.

83. A systematic campaign against yaws makes good progress. It began last year, by my instructions. In 1922, injections of novarseno-benzol was given to 22,972 persons as against 12,207 in 1921. In certain districts, the disease has been almost eradicated. The Malays travel long distances to obtain treatment. YAWS.

84. The number of vaccinations was 65,201 as against 68,280 in 1921. It will be noticed the vaccination-rate far exceeds the birth-rate. VACCINATION.

85. One case of plague, 18 of cerebro-spinal meningitis and 16 of smallpox are all there is to report. There was no case of cholera. INFECTIOUS DISEASES.

86. At the instance of the Infant Welfare Advisory Board (which has met regularly throughout the year) an Enactment for the registration of midwives was passed during the year. At the Board's request also, the Government has made arrangements for the training both of midwives, and the ayahs employed on estates. MIDWIVES.

(iii).—MEDICAL INSTITUTIONS.

87. There were on the 31st December, 1922, in the Federated Malay States, the following medical institutions:

4 European Hospitals;
40 District Hospitals;
3 Women's Hospitals;
3 Leper Asylums;
7 Gaol Hospitals;
1 Quarantine Camp (for Immigrants);
4 Vagrant or Decrepit Wards;
1 Mental Hospital;
14 Outdoor Dispensaries;
10 Town Dispensaries.

88. During the year, there were 92,690 indoor patients as against 116,785 in the preceding year. Outdoor patients numbered 433,111 as compared with 329,310 in 1921 and 275,783 in 1920. The increase in the number of out-patients and the decrease in the number of in-patients is largely due to the new Town Dispensaries, which are most successful and popular.

MENTAL DISEASES.

89. "The Mental Disorders Enactment, 1922" (repealing the Lunacy Enactment) marked a very important step; and much is meant by the fact that mental patients are no longer termed "lunatics". The arrangements for early, voluntary treatment, and for temporary or conditional discharge should be most beneficial. On the 31st December, 1922, the patients at the only institution in the country (The Central Mental Asylum, Tanjong Rambutan) numbered 838 males and 212 females. It is noteworthy that, although the number of malaria patients in the year must be some enormous figure, only 78 admissions to the asylum are attributed to malaria. Alcohol accounted for 64 admissions; and it is strange that there were more alcoholic cases amongst the Chinese than amongst Tamils. (37 Chinese, and 26 Tamils.) It is still more strange that opium accounted for only two Chinese admissions. Syphilis accounted for 35 admissions.

(iv).—RESEARCH.

MALARIA.

90. Investigations into the treatment of malaria by quinine and other alkaloids of cinchona have been continued, and details have been sent to the "Cinchona Derivatives and Malaria Committee of the Medical Research Council in London". The campaign against malaria is far from being merely a matter of preventing the breeding of anophelines: malaria is a human disease; and improved methods of its treatment as such will tend to diminish the chances of its being carried from man to man by the agency of the anopheline.

OTHER INVESTIGATIONS.

91. Interesting and important discoveries were made in respect of meliodosis (pseudo-cholera). Investigations of the protozoa of dysentery were continued, as also were studies of new methods of the diagnosis of syphilis.

MALARIA BUREAU.

92. Observations were continued throughout the year to determine whether the various species of anophelines had a definite breeding season, or whether they are capable of breeding all the year round. The general deduction which appears likely to emerge is that the increase in breeding of a species depends upon the local conditions becoming suited to that species rather than upon its having any definite breeding season. Investigations were made of oils of certain plants, and of fishes in respect of their larvicidal values.

ANNUAL REPORTS.

93. The annual reports of the Institute of Medical Research and of the Malaria Bureau are most interesting, and may be obtained, free of charge, upon application to the Superintendent, Printing Department, Kuala Lumpur.

XI.—EDUCATION.

FINANCIAL.

94. The expenditure upon Education (exclusive of a Public Works Departmental expenditure of $225,288) was $1,579,770. Of this amount, $443,502 was paid as grants-in-aid to English aided schools, and $600,383 was spent upon Malay schools. The total revenue (derived from school-fees) was only $35,770. An education rate of 1 per cent. in Sanitary Board areas produced only $101,387.

ENGLISH SCHOOLS.

95. There are 13 English Government schools for boys, 19 English grant-in-aid schools for boys, and 11 English grant-in-aid schools for girls. The total average enrolment was 2,210, 6,416 and 2,131, respectively.

ENGLISH EDUCATION.

96. It is worthy of mention that, of the 10,757 pupils in the English schools of the Federated Malay States, 221 have Government scholarships giving free education, board and lodging; 19 have other scholarships; 1,700 receive free education from the Government, and 372 receive free education from other sources. Thus, 2,312 pupils, or 21 per cent., receive a free education.

EXAMINATIONS.

97. The following results were obtained at the Cambridge University Local Examinations held in December, 1922. Senior Examination: 84 boys and 6 girls passed out of 173 and 11 entries. Junior Examination: 169 boys and 21 girls passed out of 402 and 52 entries. There were thus 280 successes as against 189 in the preceding year.

EVENING CLASSES.

98. Evening classes were started during the year in Kuala Lumpur with great success. Of the 237 men and 7 women who joined the classes, over 95 per cent. are staying on to take the course for the current year. It is to be regretted that, of the students, only eight are Malays.

RETIREMENT OF MR. SHAW.

99. The retirement of Mr. Bennett Shaw from the headmastership of the Victoria Institution, after nearly 28 years' service, was a real loss to Malaya. His aim was that the Victoria Institution should provide a real education and not a mere class instruction, and he devoted himself whole-heartedly to any work which tended to improve education in Malaya.

MALAY COLLEGE, KUALA KANGSAR.

100. The average number of boys at the Malay College, Kuala Kangsar, was 145. They are all boarders, and are educated and boarded entirely at Government expense. The expenditure was $93,468. There were two candidates for the Law Examination, 13 for the Senior Cambridge, and 14 for the Junior Cambridge. Only three boys passed the Senior, and nine the Junior Examination. The health of the school was excellent, and the industry of the students is commended.

SULTAN IDRIS TRAINING COLLEGE.

101. The Sultan Idris Training College was opened for work on the 23rd November. It is a Boarding College at which Malays undergo a three-years' course of training to be schoolmasters at the Malay vernacular schools. It has accommodation for 300 students, and opened with a temporarily reduced enrolment of 120. There is a staff of three European and seven Malay masters. The total cost of the buildings, including everything, has been $707,927 up to date.

MALAY VERNACULAR SCHOOLS.

102. The Malay vernacular schools are all Government institutions, and provide free education. There are 359 boys' schools and 58 girls' schools with average enrolments of 22,103 and 2,230. The standard of education is improving steadily. The teaching staff numbers 1,123.

TAMIL VERNACULAR SCHOOLS.

103. There are 122 Tamil vernacular schools with an average enrolment of 4,505. The standard of education, and school room accommodation, have improved. The Director of Education reports that many estate managers realize the importance of providing for the children of Tamil labourers educational facilities equal to those available in India.

CHINESE VERNACULAR SCHOOLS.

104. The number of Chinese schools registered on 31st December, 1922, was 177, with 333 teachers and 7,861 pupils. The 1921 census shows that there are in the country 33,395 Chinese boys between the ages of 5 and 15; and these schools therefore supply a real want.

THE REGISTRATION OF SCHOOLS ENACTMENT.

105. "The Registration of Schools Enactment, 1920," is working smoothly, and the results are satisfactory in every way. There were no prosecutions during the year under the Enactment.

XII POSTS AND TELEGRAPHS.

POSTAL.

106. There are 98 post offices, and 38 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered was over 20 millions, being a decrease of approximately three-quarters of a million. The number of registered and insured articles and the number of parcels posted and delivered showed a slight decrease. There was an increase in the number of cash-on-delivery parcels posted and delivered. Those delivered bore trade charges amounting to nearly $209,000, which were duly collected and remitted to the senders. This represents an increase of nearly $53,000 in value on cash-on-delivery parcels received for delivery in Federated Malay States. The cash-on-delivery parcel service with the United Kingdom made a great advance, both the number of parcels received from the United Kingdom and the value of the trade charges thereon being more than double that of the previous year. British postal orders showed an increase. The number and value of money orders issued decreased while the number and value of those paid increased.

SAVINGS BANK.

107. Savings Bank depositors increased by 1,607 during the year. The total number at the end of the year was 15,591. The average amount standing to the credit of each depositor rose to $82, an increase of $3 per depositor.

TELEGRAPHS AND TELEPHONES.

108. Telegrams despatched and delivered again showed a decrease. The total number of subscribers connected to the telephone exchanges at the end of the year was 2,002, an increase of 120. On 31st December, 1922, there were 2,235 miles of telegraph and telephone lines, and 15,062 miles of overhead wire, of which 11,785 were telephone wires. There were also 53 miles of cables, the length of single line in the cables being 5,196 miles. These figures do not include railway wires and Federated Malay States Government wires in Johore. A new telegraph circuit was erected connecting Kroh in Perak with Betong in Siam. Public telephone exchanges were opened at Kuala Pilah and Tampin. Additional trunk telephone lines were erected between Kuala Lumpur and Seremban, Ipoh and Tapah, and Seremban and Tampin. A trunk telephone line was also opened in conjunction with the Straits Settlements between Tampin and Malacca, thus providing connection between the telephone systems of Malacca Province and the Federated Malay States. Telegraph facilities were provided at Batang Malaka. The bulk of the police telephone lines have been reconstructed as metallic circuits and 87 connected direct to the public exchanges.

FINANCIAL.

109. The nett revenue collected by the department was $1,469,586, an increase of $192,320. Annually recurrent expenditure amounted to $1,495,323 and special expenditure (including $280,129 on loan account) to $294,377. The expenditure shows a decrease of $1,559,376 as compared with 1921. Temporary allowances ($202,622) and acting allowances ($3,067) are not included in these figures.

GENERAL.

110. The local letter rate was raised from four cents to five cents for the first two ounces on 16th January, 1922. A mail service was established between Kroh (Perak) and Betong (Siam).

The British Postal Agencies in China having been closed, a direct mail service with the Chinese Imperial Post Office was instituted.

The Sunday closing of all except a few of the largest post offices was introduced and resulted in a very considerable economy being effected. Telephone exchanges, however, remained open continuously day and night throughout the year.

The staffing of all branches received very close attention in view of the decrease in the traffic handled, and large reductions were made.

XIII.—PUBLIC WORKS.

111. The total expenditure of the department was $8,834,783, and the cost of administration ($1,453,577) represented 16.4 per cent. of it as against 9.38 per cent. in 1921. The Director reports that the officers, having less work than usual to do upon special services, were able to give more detailed supervision to the work in hand, and records his opinion that increased supervision effects reduction in costs, and that the salaries of the officers are saved many times over. The saving in annually recurrent expenditure ($1,246,415) was nearly equal to the provision in the Estimates for the entire staff of the department. GENERAL EXPENDITURE.

112. The annual maintenance of "works and buildings" cost $652,612 against a provision of $891,060 and an expenditure in 1921 of $899,301. Upon buildings alone (which are valued at $32,706,660) the cost of maintenance was $497,223. WORKS AND BUILDINGS.

113. Completion was effected of the Sultan Idris Training College, the Maxwell Road English School, the Bentong English School, and the British Residency, Kuala Lipis. The other buildings of the year were quarters for Government officials. NEW BUILDINGS.

114. There are 2,456 miles of metalled cart-roads, 157 miles of unmetalled cart-roads and 1,778 miles of bridle-roads and paths. The average cost of maintenance per mile of metalled road was $1,126 as against $1,464 in 1921. The total expenditure upon annual maintenance of roads, streets and bridges was $2,942,390 as against $3,937,135 in 1921. ROADS.

115. River maintenance cost $58,081 and extended to 556 miles of river. RIVERS.

116. Anti-malarial works expenditure (under the Mosquito Destruction Boards) was $75,049 against a provision of $128,800; whilst the expenditure on loan account was $68,797 against a provision of $185,400. This expenditure is quite apart from the general expenditure of the Mosquito Destruction Boards upon oiling. ANTI-MALARIAL WORKS.

117. The provision in the loan programme of works for the year was $4,534,220 and the expenditure was $2,590,061. LOAN PROGRAMME.

XIV.—RAILWAYS.

118. The receipts from all sources were $13,816,324, a decrease of 14.71 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $11,812,319, a decrease of 24.75 per cent. The nett receipts from the year's working therefore amounted to $2,004,005 compared with $501,552 in 1921. This represented 1.07 per cent. on the capital expenditure against 0.29 per cent. last year. WORKING.

119. The number of ordinary passengers decreased from 13,401,532 in 1920, to 10,551,115 in 1921, and 8,439,333 in 1922. The rates of decrease were 21.27 per cent. and 20.02 per cent. A reduction in train PASSENGER TRAFFIC.

services was made in April, and the Penang-Kuala Lumpur night mail was also withdrawn. Experimental reductions in fares are being made with the object of attracting passengers.

GOODS TRAFFIC. 120. Receipts from goods train traffic fell by $702,422 from $7,103,575 to $6,401,153, being a decrease of 9.89 per cent.

CAPITAL ACCOUNT. 121. Expenditure on capital account is referred to in the prefatory note to this report. During the current year, the expenditure was $12,808,500 (compared with $29,848,746 in 1921): of this sum $12,719,951 was provided from Loan Funds.

KELANTAN RAILWAY. 122. On the Kelantan Railway, the permanent way has been laid as far as the 53rd mile from Tumpat, and the earthwork is completed to the 66th mile. The bridge over the Kelantan river (5 spans of 250 feet and 5 spans of 150 feet) will be completed in the latter part of the current year. The expenditure during the year has been $1,338,582.

PRAI WHARVES. 123. The Bagan Luar Reclamation was completed on the 8th March. On the Southern Reclamation, the final facing of the north bund with granite rubble, and the pitching of the slope at the east end of the Lighter Basin are well in hand. All contract work on the jetty was completed in June. Work on the Coal Wharf is well in hand. The expenditure during the year has been $4,985,352.

JOHORE CAUSEWAY. 124. Very satisfactory progress has been made by the contractors. The lock is completed. The lifting bridge which will carry the road and railway across the lock is well in hand. The rubble causeway has been brought up above water level for a length of about 1,650 feet on the Singapore side, and 800 feet on the Johore side, leaving a space of about 1,000 feet of which the level is about 15 feet below water level. The depositing of rubble in this space is proceeding fast. The expenditure during the year has been $3,707,190.

RAILWAY BOARD. 125. The Railway Board met on nine occasions, and since June has had regular monthly meetings. It has three official and five unofficial members; and of the unofficials, one resides in Singapore and another at Penang.

XV.—GENERAL.

THE PRINCE'S VISIT. 126. The visit of His Royal Highness the Prince of Wales was the great event of the year. H.M.S. "Renown" conveying His Royal Highness and escorted by H.M.S. "Comus" anchored at Port Swettenham on the 28th March. On landing, His Royal Highness was met by His Excellency the High Commissioner, the Chief Secretary to Government, Their Highnesses the Rulers, the Undang of Negri Sembilan and the British Residents. His Royal Highness, accompanied by His Highness the Sultan of Perak, motored to Kuala Lumpur followed by a procession of cars. On reaching the Federal Capital, the cars drove slowly through the decorated streets of the town, amidst crowds of all nationalities. Each triumphal arch was erected by a separate State, or by a separate community. The next morning, His Royal Highness, with Their Highnesses the Rulers seated beside him, received a loyal address at the "padang" in front of the Government Offices. There was a polo match in the afternoon, followed by an official banquet. The next morning, His Royal Highness visited a rubber estate, and, after luncheon with the General Reception

Committee, left by train to re-embark on H.M.S. "Renown" for Singapore. The arrangements made by the General Reception Committee (of which Dr. E. A. O. Travers and Mr. V. A. Lowinger were Chairman and Vice-Chairman respectively) and by the Commissioner of Police (Mr. W. L. Conlay) were excellent. Vast crowds came from all parts of the Federation to see and give a loyal greeting to the heir to the British Throne. All nationalities, communities and classes united in their welcome to the royal visitor, and vied with one another in expressing their pleasure.

THE MALAYA-BORNEO EXHIBITION.

127. The Malaya-Borneo Exhibition which was opened by His Royal Highness the Prince of Wales in Singapore on the 31st March, received great support from the public of the Federated Malay States, and from the Departments of Agriculture, Forestry, Mines and Museums.

THE RETRENCHMENT COMMISSION.

128. The Retrenchment Commission was appointed on the 10th February, 1922. It held sixty-four meetings during the year and submitted forty-four Interim Reports on various branches of the Administration. In respect of certain recommendations (notably those that the Government dispense with the services of the Indian Regiment, and terminate the appointment of the Town Planner) the Government was unable to agree with the Commission; in respect of many suggestions, the Government had already taken independent action; and in respect of many recommendations, the Government approved and accepted the views of the Commission. The thanks of the Government have been expressed to the members of the Commission for the time and trouble which they devoted to their arduous task. The policy of retrenchment was carried out loyally in every State and in every Federal Department.

SUMMARY.

129. The year 1921 was described in my last annual report as "black all through". The first half of 1922 showed no improvement; but in the second half of the year there was a distinct feeling that the worst was over. There was a slow but steady rise in the price of tin; the planters were able to carry on; and the prices of imports were dropping. In October, sudden rise in the price of rubber as the result of "restriction" restored general confidence; and in the last two months of the year, rubber and tin were both produced at a profit. The danger which both the country and the Government have now to face is the possibility of the lessons of the slump being forgotten.

W. GEORGE MAXWELL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
7th May, 1923.

APPENDIX A.

FEDERATED MALAY STATES.

GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218 §	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,593,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595 §	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999 §	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888 *	23,720	1,395,923	2,790,451 *	9,469,446 *	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005 ‖	122,962,929 ‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935 ‖	161,838,118 ‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113 ‖	219,943,686 ‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389 ‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282 ‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292 §	1921
1922	52,494,110	49,311,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. * As now corrected. ‖ Excluding bullion and specie.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1922.

Dr. *Cr.*

	$ c.	$ c.	$ c.		c.
To Loan Expenses—				By Loan Subscription— 6 per cent. 1936 to 1951	44,185,714 29
Interest on Deferred instalments 6 per cent. Loan	268,092 28			By Loan Subscription— 4½ per cent. 1935 to 1945	36,000,000 00
Interest on Deferred instalments 4½ per cent. Loan	110,958 96				
		379,051 24			
Composition Stamp Duty 6 per cent. Loan ...	552,321 42				
Composition Stamp Duty 4½ per cent. Loan ...	360,000 00				
		912,321 42			
Discount on Issue Price 6 per cent. Loan ...	1,325,571 43				
Discount on Issue Price 4½ per cent. Loan ...	1,800,000 00				
		3,125,571 43			
Underwriting Commission 6 per cent. Loan	441,857 14				
Underwriting Commission 4½ per cent. Loan	360,000 00				
		801,857 14			
Commission for obtaining Underwriting 6 per cent. Loan ...	110,464 29				
Commission for obtaining Underwriting 4½ per cent. Loan ...	90,000 00				
		200,464 29			
Crown Agents Commission 6 per cent. Loan...	110,464 29				
Crown Agents Commission 4½ per cent. Loan	90,000 00				
		200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock 4½ per cent. Loan	89,355 00				
		197,404 28			
Miscellaneous — Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous — Stamps, etc., 4½ per cent. Loan	4,475 18				
		10,348 39			
Advertisements, 6 per cent. Loan	31,052 18				
Advertisements, 4½ per cent. Loan	29,630 03				
		60,682 21			
			5,888,164 69		
To Loan Works—					
Public Works Department	...	2,604,664 88			
Posts and Telegraphs Department	...	280,128 97			
Topographical Survey Department	...	168,903 04			
Railways, Open Lines ...	...	794,232 93			
" Construction...	...	11,925,718 30			
			15,773,648 12		
To Balance ...	...	...	58,523,901 48		
			80,185,714 29		80,185,714 29

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COLONIAL REPORTS, Etc.

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1148	British Solomon Islands Protectorate	1921–1922
1149	Mauritius	1921
1150	Sierra Leone	,,
1151	Uganda	,,
1152	Somaliland	,,
1153	Kenya Colony and Protectorate (April–December)	,,
1154	Gold Coast	,,
1155	Nigeria	1922
1156	Nyasaland	1921
1157	Falkland Islands	,,
1158	Weihaiwei	1922
1159	Cyprus	,,
1160	Gambia	,,
1161	New Hebrides	1921 & 1922
1162	Nyasaland	1922
1163	Zanzibar	,,
1164	St. Helena	,,
1165	Sierra Leone	,,
1166	Trinidad and Tobago	,,
1167	Bermuda	,,
1168	Grenada	,,
1169	St. Lucia	,,
1170	Leeward Islands	1921–1922
1171	Fiji	1922
1172	Ceylon	,,
1173	Gibraltar	,,
1174	British Guiana	,,
1175	Barbados	1922–1923
1176	Basutoland	,,
1177	St. Vincent	1922
1178	Bechuanaland Protectorate	1922–1923
1179	Mauritius	1922
1180	Swaziland	,,
1181	British Honduras	,,
1182	Uganda	,,

MISCELLANEOUS.

No.	*Colony, etc.*	*Subject.*
83	Southern Nigeria	Mineral Survey, 1910.
84	West Indies	Preservation of Ancient Monuments, etc.
85	Southern Nigeria	Mineral Survey, 1911.
86	Southern Nigeria	Mineral Survey, 1912.
87	Ceylon	Mineral Survey.
88	Imperial Institute	Oil-seeds, Oils, etc.
89	Southern Nigeria	Mineral Survey, 1913.
90	St. Vincent	Roads and Land Settlement.
91	East Africa Protectorate	Geology and Geography of the Northern part of the Protectorate.
92	Colonies—General	Fishes of the Colonies.
93	Pitcairn Island	Report on a visit to the Island by the High Commissioner for the Western Pacific.

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No. 1233.

FEDERATED MALAY STATES.

REPORT FOR 1923.

(FOR REPORT FOR 1922 SEE No. 1183.)

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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT

FOR THE YEAR 1923.

[The value of the dollar is 2s. 4d.]

[A pikul is 133⅓ pounds av.]

PREFATORY NOTE.

I.—HISTORICAL.

1. The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

2. British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

3. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., ibni Idris.

SELANGOR.

4. In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca

by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

5. In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

6. This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

7. In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

8. Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tiomau are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

9. In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

10. The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

11. In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio

by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, Their Highnesses the Sultans of Perak, Selangor and Pahang, His Highness the Yam Tuan of Negri Sembilan, the four British Residents, the Legal Adviser, the Financial Adviser, and eight unofficial members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

II.—GEOGRAPHICAL.

12. Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the back bone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

13. Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

14. Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

15. Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

III.—CLIMATE.

16. The temperature of the West Coast of the Malay Peninsula has but a small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from typical stations on the West of the Peninsula where the South-West Monsoon is broken by Sumatra show a decrease of rainfall from May to August. At Kuala Lipis, on the east of the main range, there is a general rise in rainfall from February until May, succeeded in some years by a distinct drop in July and August: there is a further rise culminating in October and November, followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In

the mountains, the rainfall is very high, the average yearly rainfall at "The Cottage" (Maxwell's Hill) above Taiping from 1912-1919 being 258 inches. At Jelebu in Negri Sembilan, the driest station where records were kept, the average for 1905-1919 was 60 inches. The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100° has never been recorded in the shade. The nights are cool. On the highest mountains, the temperature has been known to fall at nights to 46° Fahrenheit. In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally, they are of short duration and occur during the night.

IV.—STATISTICS.

17. The return, which forms the appendix to this report, shows for every year from 1889 onwards particulars of revenue, expenditure, imports, exports, duty on tin, duty on rubber, land revenue, railway receipts and population.

V.—POPULATION.

18. The census taken on the 24th April, 1921, shows that the population of the Federated Malay States was then 1,324,890, having increased since 1911 by 27.7 per cent. Of this population 853,528 are males and 471,362 females, the rate of increase since 1911 having been 17.7 and 51.1 respectively.

The Malay population rose from 420,840 in 1911 to 510,821 in 1921, an increase of 21.3 per cent. The rates of increase of the Malay population were 20.1 per cent. in Perak, 41.3 per cent. in Selangor, 11.3 per cent. in Negri Sembilan, and 17.3 per cent. in Pahang. The very high rate of increase in Selangor, where, in the Kuala Selangor district, the Malay population practically doubled since 1911, is due to the influx of foreign Malays, who have settled in the Coast districts to plant rubber.

The Chinese population of the Federated Malay States was 494,548 or only 61,304 more than in 1911. Practically the whole of this increase was in Chinese females, who now number 351 to 1,000 males as compared with 188 in 1911, and the lessening disparity between the sexes among the Chinese is gratifying as indicating a general tendency towards their permanent settlement in the Federated Malay States.

The rise in the Indian population was a marked feature of the 1921 census. In 1901, 58,386 persons of Indian nationality were enumerated; ten years later the number had risen to 172,465, the increase synchronising with the early development of the rubber planting industry, while in 1921 Indians in the Federated Malay States totalled 305,219. The percentages of increase since 1911 were 77.2 in Perak, 78.9 in Selangor, 84.4 in Negri Sembilan, and 31.4 in Pahang. More than four-fifths of the Indians in the Federated Malay States are Tamils.

The European population of the Federated Malay States rose from 3,284 in 1911 to 5,686 in 1921, of whom 93.2 per cent. are of British nationality. The most satisfactory feature of the census is that all the statistics, of sex, of marriage, of age and of birth place, show that the immigrant races, who have done so much to develop the resources of the

Federated Malay States, are ceasing to look upon these States as a place of temporary sojourn and are tending more and more to make their permanent home here.

VI.—RAILWAYS.

19. The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (120 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines; the West Coast line runs North-North-West through Negri Sembilan, Selangor and Perak, thence enters Province Wellesley, passing Prai—the port opposite Penang Harbour—about 472 miles from Johore Bahru, and thence proceeds through the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Siamese State Railways was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

20. The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat. It is completed and opened for traffic as far as Chegar Perah Station, 23 miles beyond Kuala Lipis, the capital of Pahang, and 164 miles from Gemas, whilst at the end of 1923 the permanent way had been laid as far as the 168th mile. The distance from railhead in Kelantan to railhead in Pahang is 98¾ miles. A section of 32 miles in Kelantan, between Tanah Merah Station and Tumpat on the East Coast is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. An extension has been made from Pasir Mas in Kelantan and runs in a westerly direction for 12 miles to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Siamese State Railways commenced on November 1st, 1921.

21. Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang the construction of deep water wharves has been completed. A causeway, which will eventually carry two lines of rails and a roadway, is being built across the Johore Strait to connect the Island of Singapore with the Peninsula, and a single line was opened for goods traffic on September 17th and for passenger traffic on October 1st, 1923.

22. The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 982 miles. The line is of metre gauge. On the mail trains on the West Coast main line there are sleeping saloons and restaurant cars. There are 238 permanent stations and 27 flag stations. The expenditure on capital account (including lines not open for traffic) was $191,975,106 up to 31st December, 1923, of which $173,061,106 was met from current revenue, and $18,914,000 from loan account.

ANNUAL REPORT, 1923.

I.—FINANCIAL.

BUDGET FOR 1923.

23. The estimates of revenue and expenditure for the year 1923 provided for a revenue of $55,355,192 and an expenditure (excluding capital expenditure, which was mainly to be met from loan moneys) of $58,884,374.

ACTUAL REVENUE AND EXPENDITURE.

24. The actual revenue for the year was $63,952,132 and the expenditure was $52,825,572. An estimated deficit of $3,529,182 was thus converted into a surplus of $11,126,560. The principal excesses as compared with the estimate were $3,822,874 under Customs, $3,227,322 under Licences and $1,226,243 under Fees of Court, etc. The sale of the Penang Hill Railway realised $1,489,130, and was completed during the year; $1,474,556 being received on this account in 1923. Of this sum, $738,623 was credited to revenue against an estimate of $750,000, and the balance was credited to loan account. The sale of the Teluk Ayer godowns, for which a provision of $1,500,000 was made, was not effected. The largest savings in expenditure were: Railways, $1,351,110; Medical, $1,077,868; Public Works, $532,544; Public Works Annually Recurrent, $632,522. The only large excess over estimated expenditure was $1,053,412 under Miscellaneous Services.

THE PUBLIC DEBT.

25. In my report for 1922 I referred to the issue in December, 1921, of the first instalment (£5,155,000) of the Straits Settlements Loan of £10,000,000 at 97, bearing interest at 6 per cent. The second instalment of £4,200,000 was floated in May, 1922, at 95, bearing interest at 4½ per cent. After deducting expenses of issue, the proceeds of these two instalments amounted to $74,297,549. Of this sum, $24,182,089 has been spent upon Railway and other works, and the unexpended balance on the 31st December, 1923, was $50,115,460. The debt to the Colony standing at $5,261,432 on the "Rice Account" on the 31st December, 1922, was settled at the end of the year.

THE LOAN TO SIAM.

26. The Siamese Government having decided not to ask for the instalment of £120,000, which would have brought the total up to the £4,750,000 originally contemplated, the loan stands at £4,630,000, and is repayable by 26 annual instalments commencing on the 1st January, 1924.

LOANS TO UNFEDERATED STATES AND BRUNEI.

27. The State of Kedah has reduced its debt to $1,500,000. The total loans to the Unfederated States and to Brunei amount to $6,005,929.

SURPLUS.

28. The surplus on the 31st December, 1922, was $24,515,818. As the revenue for the year exceeded the expenditure by $11,126,560, the surplus was increased to $35,642,378 on the 31st December, 1923. The statement immediately following shows that the whole of this surplus is not represented by cash.

ASSETS AND LIABILITIES.

29. The following statement shows the assets and liabilities on the 31st December, 1923:

		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		50,115,460	36
Composition Stamp Duty Fund, 4½ per cent. Loan		267,768	49
Sundry Outstanding Accounts ...		653,454	59
Straits Settlements Government War Service Land Grant Scheme		215	96
Indian Agency Account		431,832	87
Due to Johore		19,305	96
„ on account of Causeway		11,109	67
Family Remittances		2,514	28
Bentong Tailings Retention Scheme		59,976	95
Deposits—			
Courts	$194,740.05		
Forests	92,792.37		
Land	239,687.02		
Postal	183,450.58		
Miscellaneous ...	881,880 24		
		1,592,550	26
Sundry Funds—			
Bailey Fund ...	$ 938.25		
Police Fine and Reward Fund...	26,868.38		
Public Officers' Guarantee Fund	203,854.03		
Red Cross Fund...	124,630.40		
Miscellaneous ...	29,876.07		
		386,167	13
War Savings Certificates, 1924-1927		405,047	03
Straits Settlements Government 7 per cent. Loan, 1926		15,000,000	00
Suspense		22,467	41
Capital Fund—			
Bagan Serai Rice Mill		302,429	73
F.M.S. Government Factory ...		400,000	00
Surplus		35,642,377	24
		105,312,677	93

		$	c.
Cash in Treasuries and Banks as per distribution statement		6,574,255	36
Cash with Agencies—			
Crown Agents	$ 104,616.61		
F.M.S. & S.S. Joint a/c, India	32,696.96		
Malay States Information Agency	7,874.46		
Penang Agency... ...	5,349.57		
Singapore Agency ...	955,957.60		
		1,106,495	20
Cash in Transit		226,911	68
Fixed Deposits		5,750,000	00
Advances at call and other temporary investments by Crown Agents ...		15,551,027	94
Composition Stamp Duty Fund 4½ per cent. Loan with Crown Agents ...		267,768	49
Ceylon Agency Account		14,708	01
Due by other Governments—			
Ceylon	$ 252.53		
India	60,787.41		
Kedah	62,102.29		
Kelantan	2,172.60		
Perlis	45.54		
Singapore	31,141.69		
„ Account Johore Causeway ...	6,028.89		
Trengganu	30,953.99		
		193,484	94
Sundry Outstanding Accounts		437,585	29
Family Remittances		908	63
Investments (Surplus Funds): S.S. Municipal Debentures (at cost) ...		47,800	00
Investments specially earmarked for the redemption of Straits Settlements 7 per cent. Loan—1926		7,716,321	13
Investments (Specific Funds) (at cost):			
Bailey Fund	$ 938.25		
Police Fine and Reward Fund	26,226.75		
Public Officers' Guarantee Fund	159,296.02		
Red Cross Fund ...	124,555.36		
		311,016	38
Investments War Savings Certificates (at cost)...		405,047	03
Loans—			
Siamese Government (*b*)	$39,685,714.30		
Unfederated States and Brunei	6,005,928.57		
Planters...	2,945,018.28		
War Service Land Grant Scheme	1,198,858.49		
Miscellaneous	1,330,535.22		
		51,166,054	86
Advances		118,120	96
Imprests		67,521	57
Marine Slipway Account		10,321	47
Museums, Natural Products Account ...		1.000	00
Stores and Materials, Railways ...		2,845 696	42
„ Account, Post Office		133,584	76
„ and Furniture Account, P.W.D. ...		44,463	05
„ Account, Marine Slipway ...		26,098	93
Furniture making account, Forest Department		2,921	42
Timber Account, Forest Department ...		51,278	57
Tin Purchases		11,104,700	48
Sundry Assets		62,696	98
Bagan Serai Rice Mill		302,429	73
F.M.S. Government Factory		400,000	00
Inter-Treasury Account		30,098	95
Suspense		341,699	70
		105,312,677	93

NOTE:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account. The expenses of issue of the loan and expenditure on Sinking Fund, the instalments of which are to be provided out of revenue.

(*b*) Repayable by 26½yearly instalments commencing from 1st January, 1924.

STERLING LOAN CAPITAL ACCOUNT.

30. A statement of the sterling loan capital account is published as appendix B to this report. The sum of $80,185,714 (representing £9,000,000) has been raised; and the available balance, which had been $58,523,901 on the 31st December, 1922, was reduced to $50,115,400 on the 31st December, 1923, by the expenditure during the year on loan account.

II.--TRADE, CUSTOMS AND SHIPPING.

COMPANIES.

31. During the year, 22 local companies with a total nominal capital of $12,367,784 were incorporated and registered as compared with 20 companies ($3,708,700) in 1922, 30 ($4,988,000) in 1921, and 54 ($38,934,928) in 1920. The objects of the companies were mining in ten cases, rubber cultivation in five, other agricultural enterprise in two, the establishment of hospitals in two, commerce in two, and an electric scheme in one. At the beginning of the year, 28 companies were in course of liquidation; 15 went into liquidation during the year, and four were struck off the register as being defunct. There were 236 companies on the register at the close of the year.

TRADE.

32. The aggregate value of trade for the year, including re-exports, was $286,189,187 compared with $219,252,124 in 1922, an increase of 30 per cent. There has been decided improvement in trade all round due to the higher prices ruling for rubber and tin. The distribution per head of the population was £25. The values of imports and exports of merchandise (excluding re-exports and bullion) for the last five years are as follows:

	Imports.	Exports.	Trade balance.
1919	$118,854,965	$279,135,105	$160,280,140
1920	170,522,123	288,715,698	118,193,575
1921	102,914,877	129,463,762	26,548,885
1922	78,666,032	135,116,634	56,450,602
1923	87,954,820	190,823,527	102,868,707

DISTRIBUTION OF TRADE.

33. The distribution of trade, in imports and exports, was as follows: Singapore 47.03 per cent. and 29.09 per cent.; Penang 25 per cent. and 39.09 per cent.; Malacca .92 per cent. and 3.82 per cent.; Unfederated Malay States 3.31 per cent. and .08 per cent.; United Kingdom 9.78 per cent. and 13.61 per cent.; other British Possessions 4.91 per cent. and .71 per cent.; foreign countries 9.05 per cent. and 13.60 per cent.

Imports from the United Kingdom have fallen from 15.86 per cent. in 1922. Exports to Singapore have fallen from 40.01 per cent. in 1922. Direct exports to foreign countries have increased from 8.23 per cent.

REVENUE FROM CUSTOMS, ETC.

34. The revenue from Customs, excise and the opium monopoly yielded $30,811,501, an increase of $8,594,431. Import duties produced $5,203,685, an increase of $873,655. Export duties realised $13,149,979, an increase of $6,627,438. Excise duty yielded $581,683, an increase of $105,474.

OPIUM.

35. Sales of chandu (prepared opium) amounted to 1,007,192.6 tahils, showing an increase of 156,925.6 tahils as compared with 1922 but a decrease of 569,988 tahils as compared with 1920. There was no change in the selling price.

SHIPPING.

36. The number of ocean-going steamers, which called at Port Swettenham, was 355 with a tonnage of 1,383,394 against 340 with a tonnage of 1,317,721 in 1922. The clearances of local steamers were 618 with a tonnage of 322,514 against 659 with a tonnage of 327,386 in the preceding year.

III.—LANDS AND SURVEY.

AREA UNDER TITLE.

37. There was at the end of the year in private occupation about 2,431,015 acres held under agricultural titles, and 215,301 acres held under mining titles. It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 14.9 per cent. is land in private occupation, 15.9 per cent. is forest reserve, and 69.2 per cent. is still State land Much of the State land has no road or railway access. In the upper reaches of the Perak and Pahang rivers, there are still great areas of almost unexplored forest. Of the State land and forest reserve, 10,475 square miles are above the 500 feet elevation, and of little value for agriculture, owing to the steepness of the ground.

LAND REVENUE.

38. The land revenue (including $302,967 derived from land sales), amounted to $3,993,853 as compared with $3,825,038 (including $378,763 derived from land sales) collected in 1922. The net increase in land rents was $219,802.

COST OF SURVEY DEPARTMENT.

39. The total cost of the Survey Department to the Federated Malay States, after deducting reimbursements and revenue, was $1,206,030. Included in this is $26,298, arrears of salaries for 1922, consequent on the adoption of a new scheme of salaries for the subordinate service.

The nett expenditure for the various branches was : Revenue Surveys, $823,160; Topographical, $145,271; Trigonometrical, $50,752; Photo-Lithographic and Drawing, $43,967; Instrument Repairing, $16,588; and Head Office, inclusive of salaries of all officers on leave, $126,292.

REVENUE OF SURVEY DEPARTMENT.

40. The revenue, apart from reimbursements, amounted to $188,515, of which the Revenue Surveys contributed $139,684, the Photo-Litho. Section $46,047 and the Instrument Repairing $2,784. Surveys for Government purposes (exclusive of mapping) for which fees were not charged totalled $130,352. These were mainly done by the Revenue Branch.

WORK BY THE VARIOUS BRANCHES.

41. Requisitions for 14,291 lots, amounting to 81,487 acres, were completed by the Revenue Branch. The Trigonometrical Branch continued reconnaissance work in North-East Pahang and general control surveys. The Topographical Branch was engaged on the continuation of the general one-mile to an inch programme, the investigation and survey of Cameron's Highlands and surveys for town planning. The demand for topographical surveys is increasing, especially for large scale work necessary for designing and location. The Photo-Lithographic Branch reproduced a new series of the 1-mile topographical maps, maps of British Malaya on the 8-mile and 20-mile scale, a topographical map of Kuala Lumpur and environs, a series of district maps of Selangor showing comprehensive alienation and a series of eight-chain sheets showing all alienation. Great demands are made on the branch by government departments and the public, and the volume of work dealt with shows a large increase in both quantity and value.

GENERAL.

42. A new subordinate salary scheme was introduced during the year. The policy of the department is to use Malays wherever possible, and this has been well maintained; they now total 46 per cent. of the total number on the Establishment List.

IV.—GEOLOGY AND MINING

GEOLOGY.

43. The field work of the Geologist staff was mainly done in Kelantan, Johore, Kedah and Perlis, where interesting observations were made. Prospecting for oil by a company in the Bernam Valley ended with negative results. A map, with descriptive notes, has been prepared, and awaits publication to show all occurrences that could be traced of primary tin-ore, that is to say, tin-ore in its original matrix, whether as veins, pipes or irregular bodies.

EXPORT OF TIN.

44. The weight of tin-ore, reduced to a metallic basis, and of block tin, exported during the year was 37,649 tons as compared with 35,286 tons in 1922 and 34,490 tons in 1921. The export of tin-ore represents about 84.4 per cent. of the total. The export duty (in millions of dollars) was $7.73 in 1923, $5.97 in 1922 and $6.15 in 1921.

PRICE OF TIN.

45. The year opened with the price at $91.75 per pikul of metallic tin. On the 19th March the price stood at $118.62½; it declined from then onwards until the lowest price for the year was reached, viz., $88.50 on the 5th July. Thereafter an improvement took place which continued till the beginning of December. The highest price during the year, viz., $121, was reached on the 3rd December and the year closed with the price at $116.87½ and a rising market.

FLUCTUATIONS IN PRICE OF TIN.

46. The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

—	1917.	1918.	1919.	1920.	1921.	1922.	1923.
	$	$	$	$	$	$	$
Highest	140.00	182.50	166.00	212.00	115.00	93.62	121.00
Average	108.74	150.62	120.68	150.67	85.04	80.64	101.75
Lowest	85.00	117.50	100.00	90.00	72.00	71.75	88.50
Fluctuation	55.00	65.00	66.00	122.00	43.00	21.87	32.50

47. The feature of the year was the improved World's consumption of tin which is estimated to have exceeded production by 10,000 tons. The visible supplies decreased by 4,000 tons during the year. Heavy American buying, and activity in the English and American tin-plate trade were mainly responsible for the rise in the price at the beginning of the year. Under the Bandoeng Agreement, the Government had released to it 500 tons of tin every month, with effect from 1st April, 1923. The 4,500 tons thus released were sold in the daily sales of tin in Singapore, and a public communique now announces every month the amount thus sold. Sustained good demand from consumers, the ability of the market to absorb stocks released from the Bandoeng Agreement stocks, together with a favourable statistical position, were responsible for the recovery after the drop.

LABOUR.

48. The labour force engaged in mining (including *dulang* pass holders) was 104,556 at the end of the year. The figures for the preceding three years were: in 1922, 94,948; in 1921, 99,757; and in 1920, 102,424. The total does not include labour employed on the extraction and transport of firewood.

TUNGSTEN. 49. The export of tungsten ore (wolfram and scheelite) was as follows: wolfram 37 tons, scheelite nil. During the previous year 94.7 tons of wolfram and .3 tons of scheelite were exported. These figures do not include 31.2 tons of tungsten ores imported for treatment and subsequently re-exported.

GOLD. 50. The production of gold from the Raub Gold Mine (the only gold mine in the Federated Malay States) was 8,162 ounces. During 1922 the production had been 12,929 ounces. Alluvial native workings in various localities produced 1,405 ounces.

COAL. 51. The production of coal from the Malayan Collieries, Limited, Selangor, showed an increase of 36,064 tons during the year; the output being 317,892 tons as against 281,828 tons in 1922. The Government Railways were the largest consumers of coal and took 55 per cent.; the mines took 32 per cent. and other local consumers 2 per cent.; 5 per cent. was exported and 6 per cent. consumed at the Collieries. The hydraulic stowage system and the various operations connected with the work continued to run satisfactorily.

CLAY. 52. The Malayan China Clay and Pottery Company, Limited, is putting out a quantity of high class china clay, latex cups, and electric cleats and insulators.

V.—FORESTRY.

EXPLORATION. 53. The exploration work of the year was confined almost entirely to Negri Sembilan and Pahang. In Negri Sembilan, an area of about 18,000 acres, between the Gemas and Jelai-Gemas reserves, was found to be forest of very good quality. In Pahang, in the Temerloh district, a rich forest of about 94,000 acres was examined; and the average timber content, calculated upon a half per cent. enumeration survey, was found to be not less than 43 tons per acre. Within the last three years, in pursuance of its policy of exploring areas within which it was thought that forest reserves should lie, and of relinquishing claims upon areas found to be unsuitable, the department has examined and reported upon 3,600,000 acres, of which 2,000,000 acres have been relinquished for areas other than forestry, and 1,600,000 acres have been either reserved, or proposed for reservation, under the Forest Enactment.

RESERVES. 54. The new reserves of 1923 cover 793 square miles (a record figure), and the total area of forest reserve is now 4,428 square miles, representing 15.9 of the total area of the Federated Malay States.

EXPLOITATION. 55. The demand for timber and fuel, which had fallen very heavily in 1922, revived again in 1923, and in some cases exceeded the supply, owing to the fact that in 1922, much of the labour was dispensed with, and the carts and cattle were sold.

MINOR FOREST INDUSTRIES. 56. The departmental working of *damar penak* (or *damar chengal*) has now been thoroughly established at Kuala Pilah. The quality of the article is excellent. The grades adopted by the department were quickly established, and sales are now made to Europe and America without samples, the buyers being satisfied with the signed guarantee placed in each case. The potential value of this industry, when it spreads throughout the country, can be estimated from the fact that a Malay damar-tapper can earn $20 per mensem in addition to his income from his padi-field and other sources, and that a whole-time tapper can earn very much more.

The market for gutta-percha is very uncertain, and the industry suffers accordingly. The Forest Department is sending a consignment of about one ton of gutta-percha of the highest quality to the British Empire Exhibition with the object of getting into touch with the consumers, and of learning what they really want, and how they want it.

The condition of the cane (rattan) industry is unsatisfactory. The department hopes to learn much, at Wembley, of the market demands and the commercial classification. Jelutong has received a considerable, and increasing, interest. A concession was granted to a syndicate of the right to take bamboos in parts of the Upper Perak district for making paper pulp.

RESEARCH AND EXPERIMENT.

57. Research work was considerably hindered by the time of the head-quarter staff being much taken up with the collection and packing of exhibits for the British Empire Exhibition. Further work was done on the proposed manual of commercial timber trees. The installation of a plant for the artificial seasoning, antiseptic treatment and testing of timber has been recommended by a Committee. Tests on natural seasoning were made, as well as durability tests and tests with wood preservatives. There is as yet no plant for making tests with wood preservatives under pressure. The need for a Forest Chemist is urged. The herbarium is inconveniently crowded.

FINANCE.

58. The revenue of the department, which had been $984,100 in 1921, and $888,115 in 1922, rose in 1923 to $1,209,156 against an estimate of $959,300. The expenditure was $752,451. This very satisfactory result is due partly to increased royalties and to the profits of the damar industry, but chiefly to the increased demand for timber and fuel. In the State forests, this country possesses an asset of inestimable value; and wisely generous expenditure in the next few years may lead to developments which may make the "forest revenue" so important an item in the annual revenue of the country as appreciably to reduce the burden of general taxation.

VI.—AGRICULTURE.

STAFF.

59. At the beginning of the year, in a total establishment of 36 European officers, three appointments were temporarily suspended, and two were vacant. No new appointments were made during the year.

PRICE OF RUBBER.

60. The price of "Standard Rubber Sheet", which had been at 48½ cents in Singapore at the end of 1922, was at the same figure at the end of the year under review. Its highest price was 65¼ cents in January, and its lowest 44¾ cents in May.

EXPORTS OF RUBBER.

61. Interesting figures of the exports of rubber from the Federated Malay States over a period of years will be found in the statement printed at the end of this report.

"RESTRICTION".

62. The rubber exported from the Federated Malay States during 1923 was 102,818 tons as against 129,404 tons in 1922. The "Standard Production", on the 31st October, 1923, of the Federated Malay States was recorded as being 162,350 tons, and was classified as follows:

Estates over 100 acres...	107,557 tons
Holdings between 25 and 100 acres ...	10,793 „
Small holdings	44,000 „

These figures may be taken as being very nearly correct, and show that "Restriction" has, in the year 1923, *and in the Federated Malay States alone*, been successful in keeping more than 60,000 tons of rubber off the market. When it is remembered that, with unrestricted tapping, the actual output of the country (especially in the small holdings) would have far exceeded the "Standard Production", it must be conceded that even though "Restriction" has not raised the price of rubber to a figure that had been desired, it has, nevertheless, succeeded in preventing the market from being flooded with an unwanted commodity. There has been some trouble with forgeries of coupons; and frauds of various kinds have required constant vigilance on the part of the officials. The Commissioner of Customs has recorded his opinion that there has been very little smuggling of rubber from the Federated Malay States, and that it is less than 600 tons.

RUBBER DISEASES.

63. Of the "stem" diseases of rubber, "pink disease" is the most prevalent. There was less of it than in 1922. All European-managed estates in districts where this disease prevails maintain a pest-gang to carry out routine treatment. On small holdings, treatment of the disease is enforced by Inspecting Officers. "Mouldy rot" is the most important "bark" disease, and the area subject to it extended considerably during the year. The disease is likely to become wide-spread, and its control will require routine treatment, especially through wet weather. Effective control can be maintained at a reasonably low cost. "Black Stripe" and "Brown Bast", two other bark diseases, do not call for special comment. Of the "root" diseases, "fomes", "wet rot", "dry rot" and "brown root disease" continue to give trouble; and there is reason to fear that many old plantations will lose large areas as the result of neglect in the past.

NEW USES FOR RUBBER.

64. For the third year in succession, the Government made a grant of £3,000 ($24,814) to the Rubber Growers' Association for its work in connection with propaganda for new uses and new markets for rubber.

COCONUTS.

65. The price of best quality copra in Singapore varied from $9-75 a pikul (in July) to $12-14 (in December); and the average price was $11-30, which is about $1 better than the average for 1922. At this figure, a well-managed property yields a good profit. Co-operative methods of marketing amongst the small holders would greatly increase their profits.

PADI.

66. It is clearly recognised that the only form, in which "encouragement" of padi cultivation can be of any real use, is the adoption of a policy, under which padi cultivation becomes a profitable business. The Government Rice Mill at Krian has attained the object for which it was established, and provides a fair price to the padi planter. The Government has now decided upon a policy, under which the cost of the irrigation, or drainage, for padi cultivation of all new and large areas will be defrayed by the Government, which will not seek to recoup itself by any "assessment rate". The Government expenditure will be regarded as a subsidy to Food Production. Every effort is being made to instil ideas of co-operation amongst the padi planters, especially in the Krian district.

In Perak and Pahang, the padi crop of the spring of 1923 was up to the average. The yield from the Selangor rice-fields, which are comparatively small, was poor; and, in Negri Sembilan, considerable damage was done by rain at harvest time. An average crop throughout the country is expected from the padi, which was standing in the fields at the end of the current year.

67. Interesting and satisfactory work was done at the Government Experimental Plantation at Serdang, but the results do not call for any special comment.

68. The area under different forms of cultivation is, in acres, as follows:

State.	Padi.	Coconuts.	Rubber.	Kampong fruit.	Total.
Perak	112,884	91,765	440,518	104,536	749,703
Selangor	19,680	93,649	392,459	22,238	528,026
Negri Sembilan	31,603	17,509	279,932	20,941	349,985
Pahang	30,694	12,305	117,932	60,970	221,901
Grand total ...	194,861	215,228	1,230,841	208,685	1,849,615

The corresponding tables for 1922 were 190,594; 193,256; 1,228,661; 231,395; and 1,843,906 acres.

VII.—LEGISLATION.

FEDERAL ENACTMENTS.

69. In all, 28 Enactments, including one private Bill, were passed during the year. Important consolidating and amending Customs and Excise Enactments were passed, and the Labour Code was repealed and re-enacted, certain suggestions made by the Indian Government being incorporated in the new law. The old State Enactments dealing with harbours and lights and small shipping were repealed and replaced by a Ports Enactment and a Fisheries Enactment, and the Mineral Ores and Police Force Enactments were re-enacted in improved forms. The private Bill referred to was introduced to effect the incorporation of the Planters Association of Malaya, a measure which it is believed will increase the usefulness of that body. Legislation was also passed to enable the Government to raise short term loans by means of Treasury bills either here or in London. The only Enactment, which could be called in any way contentious, was the Town Planning Enactment. This was referred to a Select Committee, and their recommendations were adopted in full. The remaining Enactments effected amendments and improvements in existing laws, but do not call for special mention.

VIII.—POLICE.

POLICE.

70. The Force with an approved strength of 4,000 officers and men is distributed in 181 police stations and 8 police posts. Throughout the year there has been no lack of recruits, making it possible to insist on a high standard of physique and intelligence. Discipline was satisfactory and a great improvement in general smartness and keenness was noticeable, particularly among the Malays. A new system of "Refresher" Courses was introduced for the purpose of re-training subordinate police officers and constables. All police telephones are now connected with public exchanges and police stations may in certain circumstances be used as public call offices. As an experiment two police districts (Port Dickson and Mantin) are manned exclusively with Malays. Recruits for the Railway Police are now enrolled and trained at the Depôt. The expenditure of the Force was $2,827,796 and its revenue $244,298.

CRIME.

71. There was a great decrease in seizable crime, the number of offences reported being 8,473 as against 10,451 in 1922. The decreases in murder (from 121 cases to 89), in gang-robbery (from 83 cases to 61), in robbery (from 123 cases to 83) and in house-breaking (from 207 cases to 150) were marked. The robbery figures were the lowest ever recorded. The country as a whole was very quiet and there were no serious outbreaks or organised crime to be dealt with. The Criminal Registry continued to demonstrate its capability of dealing with large numbers of enquiries, among which 971 cases of sudden or suspicious death were investigated.

A comparison of numbers of the more serious offences against property in 1923 with those committed in 1904 is interesting. The figures are as follows and the period exactly corresponds with the inauguration of the Central Registry for the identification of criminals by means of finger-prints:

	1904.		1923.
Gang-robbery	236	...	61
Robbery	422	...	83
House-breaking	403	...	150
Theft (serious)	656	...	208
	1,717	...	502

IX.—PRISONS.

72. There are seven prisons. On the 1st January, 1923, there were 1,507 prisoners; during the year 6,936 were admitted; and 1,266 remained at the close of the year. The daily average figures were: Civil Prison, 139; short-sentence and revenue grade, 692; long sentence and condemned, 553. Ten executions were carried out. One prisoner escaped. None committed suicide. The daily average of sick was 3.22 per cent. as compared with 3.12 in 1922. There were 37 deaths, of which 1 was from malaria, 4 from dysentery, 5 from phthisis, 3 from pneumonia and 24 from other causes, of which debility may be presumed to be the cause or predisposing factor.

73. The total expenditure of all the prisons was $425,881. The daily average of 1,384 prisoners was maintained at a nett cost of $400,438 (the prison revenue being deducted) giving an annual cost per head of $289. The annual cost in 1922 had been $282, and in 1921 as much as $304. The daily average of prisoners had been 1,499 in 1922, and the reason for the annual increase of $7 over nett cost per prisoner in 1923 is due to the increase in the daily average of prisoners.

X.—MEDICAL.

(i).—VITAL STATISTICS.

STATISTICS.

74. The estimated population at the end of June, 1923, was 1,389,667. There were 35,653 births and 33,914 deaths: the rates being 25.66 and 24.40 per mille, respectively. The death-rate is the lowest yet recorded for any year. An improvement is recorded in the death-rate of each of the four principal towns (Kuala Lumpur, Ipoh, Taiping and Seremban). There were 6,420 deaths of children under one year of age, being an infantile mortality rate of 180.07 per mille.

(ii).—PUBLIC HEALTH.

MALARIA.

75. As usual, malaria heads the list as the most important cause of sickness and deaths. The number of deaths recorded was 15,516 (11.17 per mille). The figures for 1922 and 1921 had been 15,570 (11.44 per mille) and 17,168 (13.16 per mille). The Malaria Advisory Board

met regularly throughout the year. The Mosquito Destruction Boards have performed excellent service and their value in the campaign against malaria has been proved beyond question. Considerable attention is being focussed on the educational side of the malaria problem and the arousing of public interest therein. Malaria is a notifiable disease in many Sanitary Board areas. It was made notifiable in Kuala Lumpur, by *Gazette* Notification, on the 7th October, 1921. In 1922, only 35 cases amongst the European population were notified; and this number dropped in 1923 to the remarkable figure of only five cases. As the European population of Kuala Lumpur, according to the 1921 census, was 1,267 in that year, and as the five cases notified certainly include every case that occurred, and may, and probably do, include relapses, and cases where the infection was incurred outside the area, the figures are a striking testimony to the health of the town.

VENEREAL DISEASES.

76. Difficulty continues to be experienced in inducing the public to avail itself of the facility for hospital treatment of venereal diseases in the early stages. Public education regarding these diseases is however being actively promoted. Venereal disease clinics, centres and propaganda are in process of organisation. Injections of Novarseno-benzol were given in 29,675 cases.

YAWS.

77. The campaign against yaws was continued throughout the year with gratifying results. Injections of Novarseno-benzol were given to 31,135 persons as against 22,972 in 1922. Little trouble is found in persuading people to undergo treatment, and considerable progress has been made in the eradication of this disease.

VACCINATION.

78. The number of vaccinations was 77,724 as against 65,201 in 1922.

INFECTIOUS DISEASES.

79. Sixteen cases of plague, 12 of cerebro-spinal meningitis, 32 of smallpox and 17 of diphtheria occurred. There was no case of cholera.

INFANT WELFARE.

80. The Infant Welfare Advisory Board met regularly during the year. The Infant Welfare Centre in Kuala Lumpur has made extraordinary progress. The Centre is primarily an educational institution, which provides for young mothers of all nationalities advice and teaching in the care and management of their infants. The work of the Centre is directed rather to the supervision of the health of the infant and the education of the mother than to the treatment of the sick, but the incidental treatment of simple ailments is nevertheless included within its scope. The staff consists of a Lady Medical Officer, a European Nursing Sister and six Health Visitors. The number of attendances at the Centre has risen from 50 infants and 20 children in July, 1922, to 508 infants and 254 children in December, 1923. "Health visiting" is an essential factor in the programme of the Infant Welfare; and it is satisfactory to record that the prejudice against the invasion of the home by strangers, which is even more marked in the East than in the West, is gradually disappearing, as the mothers are understanding that the object of the visit is to help, and not to harass. Particular attention is given to antenatal work, and to education and propaganda. The Kuala Lumpur Centre has been so successful that arrangements are being made to extend this form of activity to other places.

(iii).—MEDICAL INSTITUTIONS.

HOSPITALS AND DISPENSARIES.

81. There were on the 31st December, 1922, in the Federated Malay States, the following medical institutions:

4 European Hospitals;
40 District Hospitals;
3 Women's Hospitals;
3 Leper Asylums;
7 Gaol Hospitals;
1 Quarantine Camp (for Immigrants);
4 Vagrant or Decrepit Wards;
1 Mental Hospital;
14 Outdoor Dispensaries;
10 Town Dispensaries.

During the year, there were 87,310 indoor patients as against 92,690 in the preceding year. Outdoor patients numbered 527,414 as compared with 433,111 in 1922 and 329,310 in 1921. The increase in the number of out-patients is due in a great measure to the Travelling Dispensaries which were started towards the end of 1922. These dispensaries bring medical requirements to sufferers living in distant places removed from ordinary medical facilities, and have, particularly in Pahang, proved a great success.

MENTAL DISEASES.

82. On the 31st December, 1923, the patients at the only institution for mental disorders in the country (The Central Mental Hospital, Tanjong Rambutan) numbered 900 males and 254 females. During the year 358 men and 111 women were admitted. The increase in the number of female admissions is noteworthy. Alcohol accounted for 42, and syphilis for 25 admissions. Under the former head the number of admissions of Chinese remains nearly stationary, while there was a considerable reduction in the number of Indians. The commonest form of mental disease on admission was Recent Melancholia with 115 victims. The Mental Disorders Enactment worked very satisfactorily during the year, which was the first year of its operation.

(iv).—RESEARCH.

MALARIA.

83. Further valuable research into the treatment of malaria by quinine and other alkaloids of cinchona has been conducted and a publication on the subject issued.

OTHER INVESTIGATIONS.

84. The investigation into the disease meliodosis was continued throughout the year, and additional evidence obtained in demonstration of its specific character. The first recorded case of the disease in a European came under observation. A rare case of typhoid septicaemia was discovered and examined. The Far Eastern Association of Tropical Medicine at the Fifth Congress held in Singapore in September discussed at length the subject of beri-beri, and finally adopted a number of resolutions including a recommendation that each of the Governments interested and the International Health Board of the Rockefeller Foundation be invited to nominate a representative on a "Beri-beri Committee" which shall report at the next Congress. Investigations were conducted in connection with cases of plague which occurred in Kuala Lumpur during the months of April and May. Live rats examined showed a flea index of 3.0 and all fleas were of the species Xenopsylla cheopis. These results dispose of the surmise that freedom from serious outbreaks of plague in this country might be due to the absence of an efficient transmitting agent.

MALARIA BUREAU.

85. Research into the subject of the seasonal prevalence of species of anopheline mosquitoes was continued during the year. As a result of investigation covering a period of three years, the definite conclusion appears to emerge that these mosquitoes occurring in this country have no definite breeding season but breed throughout the year and increase in frequency when conditions become suitable. Investigation work was undertaken on estates in Johore and at Sabak Bernam. At the latter place five specimens of A. barbirostris, a species hitherto considered to be innocuous, were found to be infected, and there appears little doubt that the species is an important factor in the outbreak of malaria there.

PUBLICATIONS.

86. The Institute of Medical Research issued the following publications during the year:

"Vitamins and Diet";
"The Control of Beri-beri in the Far East";
"Observations on Human Intestinal Protozoa in Malaya";
"Protozoa of the Human Mouth in Malaya".

The annual reports of the Institute may be obtained, free of charge, upon application to the Superintendent, Printing Department, Kuala Lumpur.

XI.—EDUCATION.

FINANCIAL.

87. The expenditure upon Education (including $89,107 spent by the Public Works Department on the building and upkeep of schools) was $1,867,936. Of this amount, $465,287 was paid as grants to English aided schools and $674,229 expended upon Malay vernacular education. The total revenue (derived mainly from school-fees) was $61,143. An education rate of 1 per cent. in Sanitary Board areas produced only $97,357.

ENGLISH SCHOOLS.

88. There are 19 English Government schools for boys, 14 English grant-in-aid schools for boys and 11 for girls. The total average enrolment was 3,389, 5,863 and 2,267, respectively.

SCHOLARSHIP AND FREE EDUCATION.

89. It may be noted that, of the 11,519 pupils in the English schools, 242 hold Government scholarships, giving free education, board and lodging; 45 hold other scholarships; 2,192 receive free education from the Government, and 489 free education from other sources. Thus, 2,968, or 26 per cent., receive a free education.

EXAMINATIONS.

90. At the Cambridge University Local Examinations held in December, there were 323 successes against 280 in the preceding year. In the Senior Examination 97 boys and 9 girls passed out of 179 and 18 entries. In the Junior Examination 192 boys and 25 girls passed out of 401 and 58 entries.

EVENING CLASSES.

91. Evening classes were held at Kuala Lumpur and Seremban. Most of the students were clerks in Government offices. At Seremban, classes were held in shorthand and book-keeping; at Kuala Lumpur, in those subjects and in practical mathematics, building construction, machine drawing, magnetism and electricity, telegraphy and telephony. 334 students enrolled at the beginning of the year, of whom 142 attended throughout the first term: for the second half-year 165 students were enrolled, of whom 126 remained till the end of the term.

MALAY COLLEGE, KUALA KANGSAR.

92. The expenditure on this Malay College was $82,744. There were 140 students, all boarders educated and maintained entirely at Government expense. 19 students entered for the Senior Cambridge Examination, of whom 11 passed; for the Junior there were 21 entries and 17 passes. One Junior candidate from Negri Sembilan obtained honours with distinctions in Geography, Malay, English and History. In both standards, distinctions were gained in Geography and Malay. The general health of the boys was good.

SULTAN IDRIS TRAINING COLLEGE.

93. At the beginning of the year there were 120 students in residence at this College for the training of Malay vernacular teachers, and after the Fasting Month 73 more joined. The total expenditure was $81,012, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. There were boys from every Settlement in the Colony and every Malay State under British protection except Johore. Two Perak boys died of malaria contracted during the holidays at their homes, and not at the College. Otherwise the health of the students was excellent. Manual and agricultural training plays a notable part in the curriculum.

MALAY VERNACULAR EDUCATION.

94. The Malay vernacular schools are all Government institutions and provide free education. There are 369 schools for boys and 60 for girls with average enrolments of 22,702 and 2,474. In addition to Malay Inspectors, the teaching staff numbers 1,137. The modern training of teachers, the introduction of a new series of text-books, basketry, school gardening and domestic science have led to a great improvement in these schools.

TAMIL VERNACULAR SCHOOLS.

95. There are 153 Tamil vernacular schools with an average enrolment of 5,493. An improvement in the quality of the teachers is reported. The inspecting staff was increased.

CHINESE VERNACULAR SCHOOLS.

96. The number of Chinese schools registered at the end of the year was 239 with 449 teachers. One of the most important innovations of the year was the introduction of grants-in-aid for such of these schools as apply for them and are willing to be inspected. It is desired to encourage the education of Chinese-speaking children through the medium of their own domestic dialect; and it is hoped to provide for the training of teachers and the compilation of text-books suited to local needs. The Chinese community have spent large sums on their vernacular schools, often with results not commensurate with the expenditure.

XII.—POSTS AND TELEGRAPHS.

GENERAL.

97. The year 1923 has been one of progress in practically every branch of postal, telegraph and telephone activity; there is no instance in the statistics of a retrogression of any importance. The only previous period in which the amount of correspondence exceeded that of 1923 was the boom period of 1919-20. Nevertheless the revenue for 1923 was the highest on record, and exceeded that of 1920 by $575,000, or 54 per cent. The increase compared with 1922 was $171,524.

98. The most striking feature of the returns is the great increase in telephone revenue, which is 30 per cent. greater than in 1922 and nearly double that of 1920. The telephone trunk revenue has nearly doubled since 1921.

POSTAL.

99. There are now 99 post offices and 39 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered was over 22 millions, being an increase of nearly two millions. The cash-on-delivery parcels delivered increased by nearly 30 per cent. in number, and over 50 per cent. in value, the total trade charges collected in the Federated Malay States amounting to $315,271 which were duly remitted to the senders. The number and value of cash-on-delivery parcels received from Great Britain again more than doubled. A direct parcel post exchange was established with India on 1st April, 1923. The resumption of the night mail train between Kuala Lumpur and Penang rendered possible a very great acceleration in the Malayan mail services.

MONEY ORDERS.

100. Money orders numbering 243,871 were issued and paid, the total amount representing $12,705,637. Telegraph money orders numbering 7,169 for $563,004 were issued and paid. A telegraph money order service with India was started on 1st June, 1923, and has proved popular. A money order agreement was concluded with Netherlands East Indies and operated from 1st September. The most important event of the year in connection with money orders was the conclusion of an agreement with China and the exchange started on 1st January, 1924.

SAVINGS BANK.

101. An unprecedented increase of 3,167 took place in the number of Savings Bank depositors, the total number now being 18,758. The average amount standing to the credit of each depositor rose to $96, an increase of $14 per depositor. Increased advantage was taken of the facilities for withdrawal on demand and withdrawal by telegraph.

TELEGRAPHS AND TELEPHONES.

102. Telegrams despatched and delivered showed an increase. The total number of subscribers connected to the telephone exchanges at the end of the year was 2,210, an increase of 208. There were also 1,093 extension circuits, extension bells and private lines maintained, an increase of 154. On 31st December, 1923, there were 2,330 miles of telegraph and telephone lines and 16,807 miles of overhead wires, of which 13,508 were telephone wires. There were also 53 miles of cable, the length of the single line in the cables being 5,231 miles. These figures do not include railway wires and Federated Malay States Government wires in Johore. A telephone exchange was opened at Kuala Kangsar. A trunk line was completed between Ipoh and Kuala Lumpur, thus connecting the northern and southern groups of exchanges and affording intercommunication between practically all telephone points in the Federated Malay States. Other additional trunk lines were erected between Kuala Lumpur and Tapah, Sungkai and Tanjong Malim, Kuala Lumpur and Seremban.

FINANCIAL.

103. The nett revenue collected by the department was $1,641,170, an increase of $171,524. Annually recurrent expenditure amounted to $1,641,625 and special expenditure (including $160,026 on loan account) to $177,712. The value of the services performed free of charge for other Government departments, estimated at $143,000, is not included in these figures which also exclude temporary and acting allowances amounting to $157,834.

XIII.—PUBLIC WORKS.

GENERAL EXPENDITURE.

104. The total expenditure of the department was $8,677,346, and the cost of administration ($1,215,896) represented 15.16 per cent. of it as against 16.4 per cent. in 1922. In regard to these figures of relative cost it has to be borne in mind that the services of officers of the department are not confined to the activities of the department but are not infrequently required by other departments, and Sanitary and other Boards. The Director records that the officers, having, in recent years, been employed less than usual upon special services, have been able to devote more detailed attention to the actual work undertaken, with the result that a higher standard of production has been attained. A saving has been effected of $1,960,114, which is very considerably more than the cost of administration. The saving in annually recurrent expenditure was $1,111,903.

WORKS AND BUILDINGS.

105. The annual maintenance of "works and buildings" cost $866,130 against a provision of $1,045,575 and an expenditure in 1922 of $652,612. Upon buildings alone (which are valued at $33,713,169) the cost of maintenance was $645,501.

NEW BUILDINGS.

106. In addition to the construction of quarters for Government officials, the following buildings were completed or in course of completion at the end of the year: extensions to the Training College at Tanjong Malim; a house at Teluk Anson for the Raja Muda of Perak; a sea-side residence for His Highness the Yang di Pertuan Besar of Negri Sembilan; and police buildings in Pahang.

ROADS.

107. There are 2,494 miles of metalled cart-roads, 140 miles of unmetalled cart-roads and 1,794 miles of bridle-roads and paths. The average cost of maintenance per mile of metalled roads was $1,178 as against $1,126 in 1922. The total expenditure upon annual maintenance of roads, streets and bridges was $3,126,270 as against $2,942,390 in 1922.

RIVERS.

108. River maintenance cost $79,023 and extended to 443 miles of river.

ANTI-MALARIAL WORKS.

109. Anti-malarial works expenditure was $81,562 against a provision of $117,800; whilst the expenditure on loan account was $73,439 against a provision of $250,400. This expenditure does not include the general expenditure of the Mosquito Destruction Boards upon oiling.

LOAN PROGRAMME.

110. The provision upon loan programme of works for the year was $4,335,293 and the expenditure was $2,021,547.

XIV.—RAILWAYS.

WORKING.

111. The receipts from all sources were $14,675,106, an increase of 6.22 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $12,964,757, an increase of 9.76 per cent. The nett receipts for the year's working therefore amounted to $1,710,349 compared with $2,004,005 in 1922. This represented .89 per cent. on the capital expenditure, against 1.07 per cent. last year.

PASSENGER TRAFFIC.

112. The number of ordinary passengers carried was 10,551,115 in 1921, 8,439,333 in 1922, and 10,656,384 in 1923. The number for the year therefore shows an increase of 26.27 per cent. over that for the previous year. The Penang-Kuala Lumpur night mail was reinstated on October 1st. With the object of attracting passengers, temporary

reductions in fares were made on certain sections of the Railway. Revised rates for the carriage of perishable articles, vehicles and live stock were introduced in October, and a new scale of port charges on the 1st December.

GOODS TRAFFIC.

113. Receipts from goods train traffic rose by $256,614 from $6,401,153 to $6,657,767, being an increase of 4.01 per cent.

CAPITAL ACCOUNT.

114. Expenditure on capital account is referred to in the prefatory note to this report. During the year the expenditure was $5,183,234 as compared with $12,808,500 in 1922.

KELANTAN RAILWAY.

115. On the Kelantan Railway, the permanent way has been laid as far as the sixty-first mile from Tumpat, and the earthwork is in progress up to the eighty-fifth mile. The bridge over the Kelantan river (5 spans of 250 feet and 5 spans of 150 feet) was completed during the year, as also were seven other girder bridges, and the foundations, piers and abutments for the Nal Bridge. The expenditure during the year on this section was $1,702,132.

PRAI WHARVES.

116. The land works, including the block-work wall, let to the contractors, were completed, with the exception of the gap allowed to remain opposite the old Prai Dock. The facing of the banks of the Southern Reclamation with granite pitching, and also the wharf widening, including the laying and surfacing of the roadways behind the block-work wall, were completed by the 16th May. The Jetty and Coal Wharf, which were finished in 1922, have been used by vessels coming into the port. The expenditure during the year was $1,396,980.

JOHORE CAUSEWAY.

117. Very satisfactory progress is recorded. The causeway was opened on the 17th September for goods trains, and on the 1st October for passenger trains, the wagon ferry and steam launch services across the Straits accordingly being discontinued. The lock has been in continuous use since the beginning of the year, the total number of craft passing through it being 13,512. The lifting bridge carrying the railway and roadway across the lock was completed, the operating cabin erected, and the electrical operating and controlling gear installed. Only about 41,000 cubic yards of rubble remain to be deposited. The expenditure during the year was $2,879,376.

PENANG HILLS RAILWAYS.

118. The line was completed and opened for passenger traffic on the 21st October. The expenditure during the year was $187,772.

RAILWAY BOARD.

119. The Railway Board held regular monthly meetings throughout the year. It has four official and seven unofficial members; and of the unofficials, one resides in Singapore and another at Penang.

XV.—GENERAL.

PUBLIC TRUSTEE.

120. The year under review was the first complete year of the working of the Department of the Public Trustee. The duties of the Public Trustee are (*a*) to act in the administration of estates of small value, (*b*) to act as an ordinary trustee, and (*c*) to act as a trustee appointed by the Court. During the year, he administered 15 estates of deceased persons: in one large estate, he had been appointed executor by will. He accepted six trusts during the year; and 41 wills, or copies of wills, have been deposited with him during the year for safe custody. He has been notified of his appointment as an executor under wills in a number of cases.

CO-OPERATION.

121. The Co-operative Societies Department made slow but very sure and steady progress throughout the year. The number of societies, that have been registered, is still small. The formation of a large number of societies in the early years of the movement is not to be encouraged, for a small number of efficient societies is far preferable to a large number of poorly instructed societies. Throughout the country, there is a very keen demand for instruction from the officers of the department in the methods of co-operation, and this demand appears to be continually and rapidly increasing.

LABOUR.

122. Returns of labour under section 82 of "The Labour Code, 1923," from 1,204 estates showed 121,463 Madras Indians, 31,957 Chinese, 4,791 Javanese, and 4,894 of other nationalities. The corresponding figures for 1922 were 122,589, 27,575, 4,906 and 3,724. In addition, figures show 18,767 Madras Indians, 1,079 Chinese, 119 Javanese and 2,038 other nationalities employed by Government departments. The total returns, from estates and Government departments combined, thus show 140,230 Madras Indians, 33,036 Chinese, 4,910 Javanese and 6,932 other nationalities.

HILL STATIONS.

123. The meteorological observations on Gunong Tahan were completed, and the mountain finally evacuated in July. The revised railway programme of works on the loan account does not provide for the hill railway that had once been proposed; and the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

Two meteorological observation stations were opened at Cameron's Highlands, one on Rhododendron Hill (at an elevation of 5,200 feet) and the other at Tanah Rata (4,800 feet). A topographical survey of the Highlands is being made, and the unfinished section of the road (some thirty miles) is being retraced. It is to be feared, however, that the financial position will make it difficult for the Government to proceed with the road construction in the near future.

Progress at Fraser's Hill during the year was slow, for all expenditure was cut down as much as possible, as part of the policy of economy. It is hoped that, exclusive of the main road from the Gap, there will be at the end of 1926, six miles of metalled development roads, serving the bungalow sites. Seven Government bungalows are in occupation; and nine more houses should be ready for occupation by the end of 1926. This will complete the Government building programme; and it is hoped that a number of private buildings will be erected within the next year or two. Fair progress has been made with the golf-links and the playing-field.

SUMMARY.

124. The year under review has been one of convalescence and recuperation. The country has passed through trials that have taxed its strength to the utmost; and that strength can be gauged by the figures in paragraph 32 of this report, which show a favourable trade balance, in excess of exports over imports, amounting to $102,000,000. It must be admitted, however, that the profitable price of tin has been more than counterbalanced by the unprofitable price of rubber. A price of 1*s.* 6*d.* a pound for rubber means more to this country than a price of £300 a ton for tin.

W. GEORGE MAXWELL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
26th May, 1924.

APPENDIX A.

FEDERATED MALAY STATES.

GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218 §	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,5[illegible]1,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595 §	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999 §	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888 *	23,720	1,395,923	2,790,451 *	9,469,446 *	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292 §	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. * As now corrected. ‖ Excluding bullion and specie.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1923.

Dr.	$ c.	$ c.	$ c.		$ c. *Cr.*
To Loan Expenses—					
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			By Loan Subscription— 6 per cent. 1936 to 1951	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96			By Loan Subscription— 4½ per cent. 1935 to 1945	36,000,000 00
		379,051 24			
Composition Stamp Duty, 6 per cent. Loan ...	552,321 42				
Composition Stamp Duty, 4½ per cent Loan ...	360,000 00				
		912,321 42			
Discount on Issue Price, 6 per cent. Loan ...	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan ...	1,800,000 00				
		3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00				
		801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan ...	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan ...	90,000 00				
		200,464 29			
Crown Agents Commission, 6 per cent. Loan...	110,464 29				
Crown Agents Commission, 4½ per cent. Loan	90,000 00				
		200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00				
		197,404 28			
Miscellaneous — Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous — Stamps, etc., 4½ per cent. Loan	4,475 18				
		10,348 39			
Advertisements, 6 per cent. Loan	31,052 18				
Advertisements, 4½ per cent. Loan	29,630 03				
		60,682 21			
			5,888,164 69		
To Loan Works—					
Public Works Department	...	4,646,073 35			
Posts and Telegraphs Department	...	440,154 82			
Topographical Survey Department	...	181,861 60			
Railways, Open Line ...	...	901,380 40			
„ Construction...	...	18,012,619 07			
			24,182,089 24		
To Balance ...	...	...	50,115,460 36		
			80,185,714 29		80,185,714 29

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ANNUAL.

No.	*Colony, etc.*	*Year.*
1197	Nigeria	1923
1198	Weihaiwei	"
1199	Gilbert and Ellice Islands	1922–1923
1200	Ashanti	"
1201	Gambia	1923
1202	Bahamas	1923–1924
1203	Hongkong	1922
1204	Nyasaland	1923
1205	Cayman Islands	1922
1206	Cyprus	1923
1207	Gold Coast	1922–1923
1208	Trinidad and Tobago	1923
1209	Zanzibar Protectorate	"
1210	Bechuanaland Protectorate	1923–1924
1211	Swaziland	1923
1212	Basutoland	1923–1924
1213	Turks and Caicos Islands	1923
1214	Fiji	"
1215	British Honduras	"
1216	New Hebrides	"
1217	Gibraltar	"
1218	Jamaica	"
1219	Sierra Leone	"
1220	Uganda	"
1221	Grenada	"
1222	British Guiana	"
1223	St. Vincent	"
1224	St. Helena	"
1225	Barbados	1923–1924
1226	Somaliland	1923
1227	Kenya Colony and Protectorate	"
1228	Hongkong	"
1229	Northern Territories of the Gold Coast	1923–1924
1230	Colonial Survey Committee Report	1914–1923
1231	Cayman Islands	1923
1232	Leeward Islands	1923–1924

MISCELLANEOUS.

No.	*Colony, etc.*	*Subject.*
83	Southern Nigeria	Mineral Survey, 1910.
84	West Indies	Preservation of Ancient Monuments, etc.
85	Southern Nigeria	Mineral Survey, 1911.
86	Southern Nigeria	Mineral Survey, 1912.
87	Ceylon	Mineral Survey.
88	Imperial Institute	Oil-seeds, Oils, etc.
89	Southern Nigeria	Mineral Survey, 1913.
90	St. Vincent	Roads and Land Settlement.
91	East Africa Protectorate	Geology and Geography of the Northern part of the Protectorate.
92	Colonies—General	Fishes of the Colonies.
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FEDERATED MALAY STATES.

REPORT FOR 1924.

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[redacted]

Federated Malay States.

ANNUAL REPORT

FOR

1924

BY

W. GEORGE MAXWELL, K.B.E., C.M.G.,
CHIEF SECRETARY TO GOVERNMENT, FEDERATED MALAY STATES.

KUALA LUMPUR:
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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT

FOR THE YEAR 1924.

[*The value of the dollar is 2s. 4d.*]

[*A pikul is 133⅓ pounds av.*]

PREFATORY NOTE.

I.—HISTORICAL.

1. The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

2. British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

3. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., ibni Idris.

SELANGOR.

4. In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca

by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

5. In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

6. This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

7. In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

8. Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

9. In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

10. The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

11. In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio

by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, Their Highnesses the Sultans of Perak, Selangor and Pahang, His Highness the Yam Tuan of Negri Sembilan, the four British Residents, the Legal Adviser, the Financial Adviser, and eight unofficial members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

II.—GEOGRAPHICAL.

12. Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

13. Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

14. Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

15. Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

III.—CLIMATE.

16. The temperature of the West Coast of the Malay Peninsula has but a small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from typical stations on the West of the Peninsula where the South-West Monsoon is broken by Sumatra show a decrease of rainfall from May to August. At Kuala Lipis, on the east of the main range, there is a general rise in rainfall from February until May, succeeded in some years by a distinct drop in July and August: there is a further rise culminating in October and November, followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In

the mountains, the rainfall is very high, the average yearly rainfall at "The Cottage" (Maxwell's Hill) above Taiping from 1912-1919 being 258 inches. At Jelebu in Negri Sembilan, the driest station where records were kept, the average for 1905-1919 was 60 inches. The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100° has never been recorded in the shade. The nights are cool. On the highest mountains, the temperature has been known to fall at nights to 46° Fahrenheit. In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally, they are of short duration and occur during the night.

IV.—STATISTICS.

17. The return, which forms the appendix to this report, shows for every year from 1889 onwards particulars of revenue, expenditure, imports, exports, duty on tin, duty on rubber, land revenue, railway receipts and population.

V.—POPULATION.

18. The census taken on the 24th April, 1921, shows that the population of the Federated Malay States was then 1,324,890, having increased since 1911 by 27.7 per cent. Of this population 853,528 are males and 471,362 females, the rate of increase since 1911 having been 17.7 and 51.1 respectively.

The Malay population rose from 420,840 in 1911 to 510,821 in 1921, an increase of 21.3 per cent. The rates of increase of the Malay population were 20.1 per cent. in Perak, 41.3 per cent. in Selangor, 11.3 per cent. in Negri Sembilan, and 17.3 per cent. in Pahang. The very high rate of increase in Selangor, where, in the Kuala Selangor district, the Malay population practically doubled since 1911, is due to the influx of foreign Malays, who have settled in the Coast districts to plant rubber.

The Chinese population of the Federated Malay States was 494,548 or only 61,304 more than in 1911. Practically the whole of this increase was in Chinese females, who now number 351 to 1,000 males as compared with 188 in 1911, and the lessening disparity between the sexes among the Chinese is gratifying as indicating a general tendency towards their permanent settlement in the Federated Malay States.

The rise in the Indian population was a marked feature of the 1921 census. In 1901, 58,386 persons of Indian nationality were enumerated; ten years later the number had risen to 172,465, the increase synchronising with the early development of the rubber planting industry, while in 1921 Indians in the Federated Malay States totalled 305,219. The percentages of increase since 1911 were 77.2 in Perak, 78.9 in Selangor, 84.4 in Negri Sembilan, and 31.4 in Pahang. More than four-fifths of the Indians in the Federated Malay States are Tamils.

The European population of the Federated Malay States rose from 3,284 in 1911 to 5,686 in 1921, of whom 93.2 per cent. are of British nationality. The most satisfactory feature of the census is that all the statistics, of sex, of marriage, of age and of birth place, show that the immigrant races, who have done so much to develop the resources of the

Federated Malay States, are ceasing to look upon these States as a place of temporary sojourn and are tending more and more to make their permanent home here.

VI.—RAILWAYS.

19. The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (120 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines; the West Coast line runs North-North-West through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour—about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

20. The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, Kelantan. It is completed and opened for traffic as far as Chigar Perah Station, 23 miles beyond Kuala Lipis, the capital of Pahang, and 164 miles from Gemas. At the end of 1924, the permanent way had been laid as far as the 170th mile. A section of 53 miles in Kelantan, between Tumpat on the East Coast and Krai, is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Krai towards Pahang. The distance from railhead in Kelantan to railhead in Pahang is 95 miles. Railhead at the end of 1924 was at the 63rd mile and earthwork, etc., was in progress up to Pergau, 87th mile. An extension—13 miles long—has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on November 1st, 1921.

21. Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang, work as contemplated on the wharves has been carried out. A causeway to carry two lines of rails and a roadway has been built across the Johore Strait connecting the Island of Singapore with the mainland.

22. The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,001 miles. The line is of metre gauge. On the mail trains on the West Coast main line, there are sleeping saloons and restaurant cars. There are 243 permanent stations and 28 flag stations. The expenditure on capital account (including lines not yet open for traffic) was $195,771,143 up to 31st December, 1924, of which $172,837,743 was met from current revenue, and $22,933,400 from loan account.

VII.—HILL STATIONS.

CAMERON'S HIGHLANDS.

23. Cameron's Highlands (between Perak and Pahang) are named after the late Mr. William Cameron, a Government Surveyor, who was exploring the mountain ranges in 1885. There is an area somewhat oval in shape about 3½ miles long and 3 miles wide at an elevation of about 4,800 feet containing an area of about 5,300 acres of fairly level ground. A meteorological station has been established at the place, and the Government is considering the advisability of making a road to it, and developing it as a hill station.

FRASER'S HILL.

24. Fraser's Hill (between Selangor and Pahang) is named after Mr. L. J. Fraser, who first developed it in the "nineties" as a tin mining area. A company later took over the property; and after some years, partly owing to the tin deposits being exhausted and partly owing to trouble connected with water, mining was stopped. The only access then was by a path some 5 miles long, which connected it with the Gap on the main trunk road between Kuala Kubu and Raub. The Government bought the mine-manager's house which is reserved for the use of the British Resident, Pahang, but did little more to develop the place, until the year 1919, when provision was made in the annual estimates for the survey of the trace of a road from the Gap. The road was commenced in the year 1920, and finished in 1922. The Government has at present there eight bungalows, which are intended for the use of Government employees, but which may be occupied by other than Government employees if there is a vacancy. From a Red Cross Fund, a house known as "Red Cross House" has been built, and is primarily for the use of ex-Service men and women. Three other houses are being built from the same fund. One will be for women and children, another for persons with small salaries, and another a hostel for Nursing Sisters. The Government gives 99-year leases of land on most favourable terms. One private house has already been built; two others are in the course of erection, while others will be started at an early date. A small golf course, and a cricket and football ground are being made, and there are several tennis-courts. By the end of the year 1926, six miles of metalled development roads serving the bungalow sites will have been completed.

GUNONG ANGSI.

25. This is a small hill station containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

GUNONG TAHAN.

26. The establishment of a hill station at Gunong Tahan was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further

progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The rainiest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76° F. on three occasions, and the lowest minimum temperature 48° F. There appears to be no record of investigations into the area available for the residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

KLEDANG.

27. This hill is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

28. Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

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I.—FINANCIAL.

BUDGET FOR 1924.

1. The estimates of revenue and expenditure for the year 1924 provided for a revenue of $60,559,330 and an expenditure (excluding capital expenditure, which was mainly to be met from loan moneys) of $59,878,864.

ACTUAL REVENUE AND EXPENDITURE.

2. The actual revenue for the year was $70,715,407 and the expenditure was $54,161,234. Thus the surplus was $16,554,173 against an estimated surplus of $680,466. The principal excesses as compared with the estimate were $5,115,519 under Customs, $1,087,303 under Fees of Court, etc., $1,137,690 under Interest and $1,210,202 under Railways. The largest savings in expenditure were: Railways, $1,470,355; Medical, $961,507; Public Works Department, $434,563; Municipal, $323,271; Forests, $307,706; Posts and Telegraphs, $304,432; and Miscellaneous Services, $285,482. Excesses over estimated expenditure totalled $332,337, the largest item being $181,694 under Rulers and Native Officers.

THE PUBLIC DEBT.

3 The public debt remained the same as at 31st December, 1923, namely, the Straits Settlements 7 per cent. Loan of $15,000,000, and the Straits Settlements Sterling Loan of (£9,355,000) $80,185,714, the first instalment of which (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) was issued in May, 1922, at 95, bearing interest at 4½ per cent. After deducting the expenses of issue, the proceeds of these two instalments amounted to $74,297,549. Of this sum, $31,548,615 has been spent upon Railway and other works, and the unexpended balance on the 31st December, 1924, was $42,748,934. Investments specially earmarked, from the proceeds of the sale of tin, for the redemption of the Straits Settlements 7 per cent. Loan, 1926, amounted on the 31st December, 1924, to $13,871,914.

THE LOAN TO SIAM.

4. The Siamese Government Loan (£4,630,000) $39,685,714, which is repayable by 26 annual instalments commencing on the 1st January, 1924, has been reduced to $38,790,112 on 31st December, 1924, by the payment of the first instalment due on 1st January, 1924. As this loan is being repaid by equal yearly payments to include principal and interest, the principal part of the instalments will steadily increase.

LOANS TO UNFEDERATED STATES AND BRUNEI.

5. On 31st December, 1924, the State of Kedah had reduced its debt to $400,000. The total loans to the Unfederated States and to Brunei amount to $4,752,429, and are made up as follows: Kedah, $400,000; Kelantan, $3,684,929; Perlis, $250,000; and Brunei, $417,500.

SURPLUS.

6. The surplus on the 31st December, 1923, was $35,642,378. As the revenue for the year exceeded the expenditure by $16,554,173, the surplus was increased to $52,196,551 on the 31st December, 1924. The statement immediately following shows that the whole of this surplus is not represented by cash, but shows that advances at call, and other temporary investments with the Crown Agents have risen to $29,828,311 from $15,551,027 on the corresponding date in the preceding year.

ASSETS AND LIABILITIES.

7. The following statement shows the assets and liabilities on the 31st December, 1924.

		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		42,748,934	58
Composition Stamp Duty Fund, 4½ per cent. Loan		273,010	30
Sundry Outstanding Account		724,548	14
Straits Settlements Government War Service Land Grant Scheme		2,295	36
Due to India		642,347	76
Due to Singapore		5,838	13
Ceylon Agency Account		32,875	41
Family Remittances		4,034	26
Bentong Tailings Retention Scheme		65,110	83
Deposits—			
Courts	$127,944.33		
Forests	129,246.86		
Land	262,348.38		
Postal	268,881.79		
Miscellaneous	861,631.71		
		1,650,053	07
Sundry Funds—			
Bailey Fund	$ 938.25		
Police Fine and Reward Fund	26,619.90		
Public Officers' Guarantee Fund	214,484.23		
Red Cross Fund	97,461.75		
Miscellaneous	31,592.85		
		371,096	98
War Savings Certificates, 1924-1927		81,456	54
Straits Settlements Government 7 per cent. Loan, 1926		15,000,000	00
Suspense		13,543	92
Capital Fund—			
Bagan Serai Rice Mill		302,429	73
F.M.S. Government Factory		400,000	00
Surplus		52,196,550	39
		114,514,125	40

		$	c.
Cash in Treasuries and Banks as per distribution statement		6,420,879	09
Cash with Agencies—			
Crown Agents	$ 89,400.14		
F.M.S. & S.S. Joint a/c, India	34,233.77		
Malay States Information Agency	9,004.54		
Penang Agency	728,872.94		
Singapore Agency	1,176,228.82		
		2,037,740	21
Cash in Transit		227,936	92
Fixed Deposits		7,250,000	00
Advances at call and other temporary investments by Crown Agents		29,828,311	84
Composition Stamp Duty Fund, 4½ per cent. Loan with Crown Agents		273,010	30
Due by other Governments—			
Ceylon	$ 389.39		
India	20,154.04		
Johore	21,237.42		
Kedah	80,966.06		
Kelantan	141,821.02		
Perlis	454.79		
Trengganu	13,899.56		
		278,922	28
Sundry Outstanding Account		478,997	92
Family Remittances		852	98
Investments (Surplus Funds):			
S.S. Municipal Debentures (at cost)		27,300	00
Investments specially earmarked for the redemption of Straits Settlements 7 per cent. Loan, 1926		13,871,914	44
Investments (Specific Funds) (at cost):			
Bailey Fund	$ 938.25		
Police Fine and Reward Fund	26,226.75		
Public Officers' Guarantee Fund	171,696.02		
Red Cross Fund	96,555.36		
W. & O. Contribution Account	1,640.00		
		297,056	38
Investments War Savings Certificates (at cost)		66,056	54
Loans—			
Siamese Government (*b*)	$38,790,111.69		
Unfederated States and Brunei	4.752,428.57		
Planters	2,474,824.00		
War Service Land Grant Scheme	1,461,900.06		
Miscellaneous	1,273,604.62		
		48,752,868	94
Advances		121,948	62
Imprests		69,586	45
Marine Slipway Account		47,071	09
Museums, Natural Products Account		1,000	00
Furniture Making Account, Forest Department		2,222	51
Timber Account, Forest Department		308,150	59
Stores and Materials, Railways		2,406,118	44
„ „ Account, Post Office		384,867	47
„ and Furniture Account, P.W.D.		29,989	43
„ Account, Marine Slipway		26,250	04
Sundry Assets		50,494	69
Inter-Treasury Accounts		30	07
Suspense		552,118	43
Bagan Serai Rice Mill		302,429	73
F.M.S. Government Factory		400,000	00
		114,514,125	40

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account. The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of revenue.

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

STERLING LOAN CAPITAL ACCOUNT.

8. A statement of the sterling loan capital account is published as appendix B to this report. The sum of $80,185,714 (representing £9,000,000) has been raised; and the available balance, which had been $50,115,400 on the 31st December, 1923, was reduced to $42,748,935 on the 31st December, 1924, by the expenditure during the year on loan account.

II.—TRADE, CUSTOMS AND SHIPPING.

COMPANIES.

9. During the year, 25 local companies with a total nominal capital of $12,324,763 were incorporated and registered as compared with 22 companies ($12,367,784) in 1923, 20 ($3,708,700) in 1922, 30 ($4,988,000) in 1921, and 54 ($38,934,928) in 1920. The objects of the companies were mining in 14 cases, rubber cultivation in one case, mining and rubber cultivation in one, coal-mining in one, general agricultural purposes in one, palm-oil extraction in one, a cinema in one, a hospital in one, and general trading in four cases. The number of local companies in liquidation in 1924 was 38; and during the year nine local companies were struck off the register as defunct. There were 240 companies on the register at the close of the year.

TRADE.

10. The aggregate value of trade for the year 1924, including re-exports, was $310,321,042, shewing an increase of $24,131,855 or 8.4 per cent. compared with the total of the previous year. The marked improvement noted in the report for the year 1923 has been continued, mainly owing to the high price obtained for tin throughout the year and the larger quantity exported, and to the improvement in the price for rubber in the second half of the year. The distribution of trade per head of the population was £30 as compared with £25 for the previous year. The values of imports and exports of merchandise (excluding re-exports, bullion and parcel post) for the last six years are as follows:

	Imports.	Exports.	Trade balance.
1919	$118,854,965	$279,135,105	$160,280,140
1920	170,522,123	288,715,698	118,193,575
1921	102,914,877	129,463,762	26,548,885
1922	78,666,032	135,116,634	56,450,602
1923	87,954,820	190,823,527	102,868,707
1924	96,489,612	206,804,431	110,314,819

DISTRIBUTION OF TRADE.

11. The distribution of trade in imports and exports was as follows: Singapore 43.96 per cent. and 29.50 per cent.; Penang 23.69 per cent. and 41.76 per cent.; Malacca 1.23 per cent. and 2.84 per cent.; Unfederated Malay States 3.07 per cent. and .30 per cent.; United Kingdom 11.08 per cent. and 9.87 per cent.; other British Possessions 7.47 per cent. and .80 per cent.; and foreign countries 9.50 per cent. and 14.93 per cent. Each year sees a slight fluctuation in the above figures but there is no permanent trend in any direction. Singapore and Penang retain their position as the chief ports of Malaya, and about 70 per cent. of the total trade of the Federated Malay States passes through them.

REVENUE FROM CUSTOMS, ETC.

12. The revenue from Customs, excise and chandu monopoly amounted to $35,031,742, a greater sum than has ever been collected before, and $4,177,902 in excess of last year's receipts. Import duties produced $5,659,921, an increase of $370,327 as compared with 1923.

The amount realised on export duties was $17,032,588, an increase of nearly four millions. Excise duty on locally manufactured spirits produced $616,227, an increase of $34.544.

OPIUM.

13. The nett revenue from the chandu monopoly was $10,543,859 as compared with $10,270,959 in 1923. The extent to which the consumption of opium has diminished in the Federated Malay States, despite the increase of population, can be seen from the following figures:

		Tahils.
1904	(4,229 chests opium*)	4,736,480
1909	(2,941 ,, ,,)	3,293,920
1914		1,719,949
1919		1,650,938
1924		1,025,707

The scheme under which Government retail shops are gradually replacing licensed shops is making steady progress, and is responsible for a considerable part of the increased revenue. The amount of chandu sold was 1,025,739 tahils, and the slight increase in sales of 18,547 tahils, as compared with the previous year, is ascribed to the high price of tin. During the year 44 new Government retail shops were opened, making a total of 90 as against 46 in 1923. Only ten now remain to be opened in 1925, when the scheme will be completed and the retail "off" sale will be entirely in Government hands. Preparations were made during December for the opening of Government smoking shops. Two were opened; and, when experience has been gained, the system will be gradually extended until the entire sale of chandu will be conducted by the department. In connection with the British Malaya Opium Committee Report, 1924, a commencement has been made towards a system of registration of smokers. The clerk-in-charge at each retail shop keeps a book, in which he enters the name of each customer, together with his address, nationality or tribe and occupation. The public will thus become gradually accustomed to the idea of registration, and the complete scheme may be introduced later without insuperable difficulty. In the small town of Tapah, the system has already developed so far that there is a complete register of regular customers: each customer has a number which he knows, and by which he is known, and this number corresponds with the page of the register in which his purchases are recorded.

RUBBER SMUGGLING.

14. Very little smuggling, other than rubber smuggling, which owes its origin to restriction, is carried on in the country. In order to cope with the rubber smuggling a fleet of six large motor launches has been purchased, and these launches have been in operation since March, 1924. The direction of this fleet is entrusted to the Customs Department, Federated Malay States, which is responsible for the prevention of rubber smuggling by sea from Johore, Malacca, the Dindings, Province Wellesley and Kedah as well as from the Federated Malay States. Sixty-nine boats in all were seized during the period 1st March to 31st December, 1924, fifty-five being in Johore waters, ten in waters of the Colony, and four off the coast of the Federated Malay States. The total quantity of rubber seized was 3,116 pikuls; 235 persons were

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* Calculated at 40 balls of opium to one chest and 28 tahils of pure chandu per ball of opium.

convicted, and fines were imposed aggregating over one million dollars. In addition to the above a great deal of land preventive work for the Colony has been done by the Federated Malay States Superintendent stationed in Malacca where he collects Customs duty for the Federated Malay States and rubber duty for the Colony. He has been responsible for the capture of 14 boats on the point of sailing and has seized 630 pikuls of rubber.

SHIPPING.

15. The number of ocean-going steamers, which called at Port Swettenham, was 413 with a tonnage of 1,578,503 against 355 with a tonnage of 1,383,394 in 1923. The clearances of local steamers were 622 with a tonnage of 316,086 against 618 with a tonnage of 322,514 in the preceding year. The vessels, other than native craft, which entered and cleared at the various ports of the Federated Malay States aggregated 9,971 with a total tonnage of 4,994,600 tons.

BANKRUPTCY.

16. During the year, 227 bankruptcy notices were issued, 100 bankruptcy petitions filed, 48 receiving orders and 40 adjudication orders made There was an increase in the work over that of the preceding year. No composition or scheme of arrangement was approved by the Court, and no debtor was prosecuted or committed.

III.—LANDS AND SURVEY

AREA UNDER TITLE.

17. There was at the end of the year in private occupation about 2,252,493 acres held under agricultural titles, and 195,598 acres held under mining titles.*

It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 13.8 per cent. is land in private occupation, 16.8 per cent. is forest reserve, and 69.4 per cent. is still State land, including land reserved for other purposes than forests. Much of the State land has no road or railway access. In the upper reaches of the Perak and Pahang rivers, there are still great areas of untouched forest. Of the State land and forest reserve, 10,475 square miles are above the 500 feet level, and, owing to the steepness of the ground, of little value for agriculture.

LAND REVENUE.

18. The land revenue (including $376,112 derived from land sales), amounted to $4,135,321 as compared with $3,993,853 (including $302,967 derived from land sales) collected in 1923.

COST OF SURVEY DEPARTMENT.

19. The cost of the Survey Department is summarised as follows :

	Gross Expenditure.	Reimbursement and Revenue.	Nett Expenditure.
Revenue Account, 1924...	$1,295,741	$372,235	$923,506
Capital Account, 1924 ...	246,893	96,195	150,698
	1,542,634	468,430	1,074,204
The figures for 1923 were	1,515,779	309,749	1,206,030

The amount recovered in Survey Fees was $196,247 on an expenditure of $880,050, but this does not represent the value of survey work done, for in addition to the fees recovered $109,660 worth of work was done for other Government departments. The nett expenditure of the various branches was: Revenue Surveys, $683,803; Topographical, $150,698; Trigonometrical, $35,517; Map Production, $43,504; Instrument Repairing, $11,835; and the Head Office, inclusive of all leave salaries, $148,847.

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* It is to be regretted that, owing to a clerical error, the figures supplied to me for my report for 1923 were inaccurate.

WORK BY THE VARIOUS BRANCHES.

20. Requisitions for 15,893 lots, totalling approximately 90,000 acres, were satisfied by the Revenue Branch, and 1,321 sub-divisions of property were done. This does not include forest reserves in which the acreage is very large for the amount of chainage. The trigonometrical work was mainly outside the Federated Malay States. In Ulu Pahang a few secondary points were fixed for the control of topographical work, but the main work was the completion of the primary triangulation of Trengganu and the extension northward of the reconnaissance map of Trengganu. There is now a good working map of that country from its southern boundary almost to Kuala Trengganu and a sketch map of the northern portion of the State is also being compiled. The topographical work was again of a very varied nature. Surveys on all scales from one inch to a mile for the standard map, to 80 inches to a mile for town purposes, were undertaken. The main work, the standard map of the country, was advanced across the crest of the main range into Pahang, and a start was made in Johore in the area in which development is most likely to take place. The policy now is to push forward as rapidly as possible in advance of development so as to save expenditure on trial surveys for special purposes, and the year 1926 should see a large contribution to the map. The demand for special topographical surveys continues to increase so rapidly that it is difficult to fulfil all demands in a reasonable time. A noteworthy feature is the recognition by the public of the value of large scale maps for the development of properties, and it is anticipated that there will be a steadily increasing demand for the services of topographers. The programme of topographical surveys of forest reserves is much in arrears. The Map Producing Branch fully maintained its efficiency and the map of Singapore and the adjacent Islands on a scale of four inches to a mile in 16 sheets is a notable contribution to the cartography of the country. It is a credit to the system under which local youths have been trained as draftsmen and printers by the European officers. The map is in every way worthy of a first-class map producing office.

STAFF.

21. The authorised establishment list of European appointments in the department is 78, comprising 52 in the Federated Malay States, 9 in the Straits Settlements, 9 in Johore, and 8 in Kedah. During the year, three appointments were in abeyance, and nine were vacant.

IV.—GEOLOGY AND MINING.

STAFF.

22. There are five European appointments in the Geological Department, and 32 in the Mines Department, including eight Inspectors of Machinery. All the appointments in the Mines Department are filled: there is temporarily a vacancy in the Geological Department.

GEOLOGY.

23. Owing to the absence in England of the Geologist and the Assistant Geologist for a considerable part of the year, the amount of field work done was not great. A certain amount was done in Kelantan, Perlis and Perak. The publications of the year were a paper by

Mr. J. B. Scrivenor, Geologist, on the "Geology of Singapore Island" and a map of Kinta showing all known occurrences of lode tin-ore by Mr. E S. Willbourn, Assistant Geologist.

EXPORT OF TIN.

24. The export of tin-ore reduced to a metallic basis, and of block tin during the year was 44,043 tons compared with 37,490 tons in 1923 and 35,286 tons in 1922. The export of tin-ore represents about 84.7 per cent. of the total. The export duty (in millions of dollars) was $12.56 in 1924, $7.73 in 1923 and $5.97 in 1922.

PRICE OF TIN.

25. The strong market at the end of 1923 was maintained and the price per pikul of metallic tin rose from $118 at the beginning of the year to $148 on March 13th, when the highest price of the year was reached. The price then declined and the lowest price of the year, $100.75, was reached on May 25th. An improvement then set in up till September 4th with a price of $130.50, followed by another decline to $111 on September 24th. From that date a steady improvement took place and a price of $137.37 was reached at the close of the year.

FLUCTUATIONS IN PRICE OF TIN.

26. The following table shows the fluctuations in the prices of tin for the last seven years in dollars per pikul :

—	1918.	1919.	1920.	1921.	1922.	1923.	1924.
	$	$	$	$	$	$	$
Highest	182.50	166.00	212.00	115.00	93.62	121.00	148.00
Average	150.62	120.68	150.67	85.04	80.64	101.75	124.19
Lowest	117.50	100.00	90.00	72.00	71.75	88.50	100.75
Fluctuation	65.00	66.00	122.00	43.00	21.87	32.50	47.25

GOVERNMENT TIN STOCKS.

27. The Government completed during the year its sale of the accumulated stocks of tin, which form part of what has been generally known as the Bandoeng Conference tin stocks. The Government's tin had been bought first at $110 per pikul, then at $115, and lastly at $100, over a period extending from the 15th December, 1920, to the 25th February, 1921. In this way 9,858 tons were bought at a total cost of $18,839,045, the average price being $113.75 per pikul. By an agreement between the parties to the Bandoeng Conference, this tin, together with the stocks of the other parties, was withheld from the market until April, 1923, when the parties agreed to a release, to sell or to hold, to each party of 5 per cent. of its stock every month. This Government began to sell in June, 1923; and in three months, June, September and October, had sold 3,000 tons at prices between $100 and $101 per pikul. From November, 1923, the price steadily improved; and, except for the period from May to July, 1924, when the Government deliberately withdrew from the selling market, the Government sold at prices ranging between $108 and $141 per pikul. The total sales realised $19,687,094, giving an average price of $118.86 per pikul. Storages charges amounted to $189,353, and the Government's gross profit was thus $658,695. In order, however, to arrive at a correct estimate of the Government's transaction in tin, it is necessary to set off an amount for interest, for during the three years when almost $20,000,000 were locked up in tin, the Government had been forced either to postpone payment of existing debts, or to borrow money elsewhere to extinguish them. Interest

was computed on the total sum involved at the rates on the "rice debt" to the Colony until the 30th September, 1923, and thereafter at 4½ per cent. per annum and amounted to $3,275,862. Thus the cost to the Government of its assistance to the tin industry was $2,617,167. The fact that this large quantity of tin was unloaded upon the market without any appreciable disturbance demonstrates the soundness of the consuming demand. It was all the more remarkable in view of the increase in the Federated Malay States production of over 6,000 tons, with, so far as is known, no corresponding decrease in production elsewhere.

LABOUR.

28. The labour force engaged in mining (including *dulang* pass holders) was 114,273 at the end of the year. The figures for the preceding three years were: in 1923, 104,556; in 1922, 94,948; and in 1921, 99,757. The total does not include labour employed on the extraction and transport of firewood.

TUNGSTEN.

29. The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin improved somewhat and was as follows for this and the previous year:

	Wolfram. Tons.	Scheelite. Tons.
1924	8.45 ...	89.16
1923	37.56 ...	—

GOLD.

30. The production of gold from the Raub Gold Mine (the only gold mine now working in the Federated Malay States) was 12,268 ounces compared with 8,162 ounces in 1923. In addition alluvial gold was recovered in various places to the extent of 2,692 ounces.

COAL.

31. The production of coal from the Malayan Collieries Limited, Selangor, was 372,795 tons, an increase of 54,903 tons on the previous year. Consumption was as follows:

Federated Malay States Railways	51.8	per cent.
Mines	39.0	,,
Other local consumers	1.8	,,
Exported	1.7	,,
Consumed on Colliery	5.7	,,
	100.0	,,

With the exception of a rush of water in the North Mine, which was successfully dealt with, nothing untoward occurred and the mine remains in excellent condition and is worked with the least possible loss of coal. Renewed interest is being taken in the small deposit of coal at Enggor.

GRAVEL PUMPS.

32. The use by Chinese of the gravel pump, popular enough in bad times, has increased enormously recently, especially in Kinta. There are now 42 mines employing gravel pumps in the Federated Malay States and their characteristic scaffoldings are to be seen in all mining areas.

ILLICIT MINING.

33 The Senior Warden of Mines reports that, with the help of the new Mineral Ores Enactment, the control of illicit mining has greatly improved.

V.—FORESTRY.

STAFF.

34. At the beginning of the year in a total establishment of 34 officers (including an officer in Johore and another in Kedah) five appointments were temporarily suspended, and three were vacant. One officer retired, one died, and five Assistant Conservators were appointed

EXPLORATION.

35. All easily accessible forest that was in danger of destruction, or was likely to be alienated, has now been examined. The remainder is mountain or swamp land, or is at present inaccessible owing to lack of means of communication. An area of about 40,000 acres south-east of the Rompin Forest Reserve, Pahang, was examined and rejected for purposes of forest reservation.

RESERVES.

36. New reserves cover 255 square miles, making the total area of reserves 4,686 square miles. A further 1,170 square miles have been preliminarily notified as proposed reserves.

EXPLOITATION.

37. The demand for timber and fuel throughout the year was very strong, the outturn for the year being 789,412 tons compared with 650,601 in 1923. These figures do not include the large quantities of wood taken under free grants. The increase is due principally to the high price of tin. This rapid consumption gives cause for some anxiety in the chief mining centres in Perak and Selangor: the fear being not so much that there is insufficient forest, but that means of communication and methods of transport may prove inadequate.

DAMAR.

38. The Government *damar penak* industry developed steadily. The outturn for the year was 139 tons, being 87 tons more than that of 1923. Negri Sembilan is still the main source of supply. Development in Perak and Pahang, where there are hundreds of thousands of trees waiting to be tapped, is disappointing. Malay labour is scarce, and such as is available is uncertain and irregular. Damar tapping requires considerable courage and skill, for it involves the climbing of big trees which have no branches on their stems. The price of *damar penak* was satisfactory throughout the year.

JELUTONG.

39. The trade in jelutong shows a remarkable increase. The outturn was 354 tons compared with 133 tons in 1923. The product as exported by the principal licensees is reported by consumers to be of the best quality. The market requirements of 1925 are estimated at 4,400 tons. There are large numbers of trees awaiting tapping in all parts of the Federated Malay States. The main obstacle to development is, as in the case of damar, the lack of regular labour.

RESEARCH.

40. Research work was somewhat hindered by the unavoidable absence of the Forest Research Officer during the greater part of the year. The durability tests and tests of various wood preservatives were carried on and extended on the lines of previous years. Useful work was also done in recording observations of the behaviour of various timbers while seasoning. The important work of mechanical tests and experimental impregnation remains to be done.

THE TIMBER BRANCH.

41. The activities of the Timber Branch of the department were limited to supplying timber to Government departments. The whole question of the exploitation and conversion of timber is still under consideration.

FINANCIAL.

42. The financial results of the year are very satisfactory. Revenue amounted to $1,503,901 and the surplus of revenue over expenditure was $742,571. Both figures are records.

VI.—AGRICULTURE.

EUROPEAN STAFF.

43. At the beginning of the year, in a total establishment of 36 European officers three appointments were temporarily suspended and two were vacant. During the year three additional vacancies were created by termination of agreements. No new appointments had been made before the close of the year.

PRICE OF RUBBER. /

Start /

44. From 49 cents a pound at the beginning of the year the price of "Standard Rubber Sheet" fell to 31½ cents in May. At the end of December the price was 67 cents, its highest since 1920. The statistical position showed no justification for the fall in price in the middle of the year, and it is difficult to avoid the conclusion that it was due to market manipulation.

EXPORTS OF RUBBER.

45. The rubber exported from the Federated Malay States during 1924 was 94,731 tons (this includes 783,491 gallons of latex calculated as containing 3½ lbs. of dry rubber a gallon) as compared with 102,818 tons in 1923 and 129,404 tons in 1922.

"RESTRICTION."

46. Throughout the year, the rubber planters of Malaya continued to be subject to the provisions of the Export of Rubber (Restriction) Enactment. The percentages of release in the four quarters of the year were 60 per cent., 60 per cent., 55 per cent., and 50 per cent., respectively. The "Standard Production" for the second year of "Restriction" (1st November, 1923, to 31st October, 1924) for the Federated Malay States was placed at 142,264 tons and was classified as follows:

Estates over 100 acres	95,854 tons
Holdings between 25 and 100 acres ...	9,420 ,,
Small holdings	36,990 ,,

The "Standard Production" for the first year of "Restriction" had been considerably higher, namely, 162,350 tons, classified as follows:

Estates over 100 acres	107,557 tons
Holdings between 25 and 100 acres ...	10,793 ,,
Small holdings	44,000 ,,

The reduction in "Standard Production" was a result of the activities of the Assessment Committee appointed early in 1924 to review the methods of ascertaining "Standard Production" which were adopted on introduction of the machinery of restriction in 1922. Calculated upon "Standard Production" alone, the amount of rubber that has been kept off the market by "Restriction" is shewn in the following tables.

FEDERATED MALAY STATES.

	1923. Tons.		1924. Tons.
Standard Production	162,350	...	142,264
Exports, Federated Malay States ...	102,818	...	96,054
Estimated as withheld from the market	59,532	...	46,210

BRITISH MALAYA.

	1923. Tons.	1924. Tons.
Standard Production	274,000	246,900
Exports, Restriction Area	177,644	165,241
Estimated as withheld from the market	96,356	81,659

But these figures, enormous as they are, do not give a correct impression of the quantity actually kept off the market, for, as is well known, "Standard Production", with its various allowances, and its maximum of 400 pounds per acre, is far below the potential output of the country. On the 1st January, 1924, the stocks of rubber in the United Kingdom were 66,563 tons. At the close of the year these had been reduced to 32,376 tons and at the end of April, 1925, they were 12,000 tons.

Conservative systems of tapping which, perforce, have been adopted on all rubber holdings since November, 1922, mean, besides preservation of bark, lower disease incidence and prolongation of yielding capacity. In addition to its undoubted success in the object for which it was introduced "Restriction" has given pause to the wise to consider the ultimate value of previously accepted methods of tapping and cultivation.

RUBBER DISEASES.

47. "Stem" and "root" diseases of rubber were kept well under control. A new "bark" disease was reported and controlled. "Mouldy rot" gave considerably less trouble than in the previous year. There were very few cases of "Brown Bast". It is clear now that this is merely one of the results of over-tapping.

RUBBER PROPAGANDA.

48. For the fourth year in succession the Government made a grant of £3,000 ($24,814) to the Rubber Growers' Association in connection with propaganda for new uses and markets for rubber. On the 20th May, 1924, the Federal Council made provision for the expenditure of a sum of $290,000 for propaganda purposes relative to rubber. Half of this sum was entrusted to the Rubber Growers' Association and the other half was devoted to propaganda in Malaya and other Eastern countries, a special Committee being appointed for administration purposes. A trained propagandist was recruited in England and assumed duty in September.

RUBBER RESEARCH INSTITUTE FOR MALAYA.

49. After prolonged correspondence the proposal to establish a Rubber Research Institute for Malaya was approved by the Secretary of State for the Colonies in August, and a provisional Board of Directors has been appointed. The main correspondence on the subject is contained in Federal Council Papers Nos. 9 of 1919, 10 of 1919, 11 of 1923 and 25 of 1924. At the meeting of the Federal Council held on the 25th November, 1924, a resolution was passed approving the scheme for the creation of a Rubber Research Institute and the introduction of legislation to incorporate it. Accordingly a Bill entitled "The Rubber Research Institute of Malaya Bill" was prepared, but it was not possible to introduce it in Federal Council before the end of the year. Financial provision for the scheme will be made by

the imposition of a special export duty on rubber of 10 cents per pikul, in addition to the ordinary export duty of 2½ per cent. *ad valorem*, provided that, so long as the present export duty under the Rubber Restriction Enactment, 1924, is in force, the special export duty will not be imposed, and a corresponding amount will be paid by the Government to the Institute.

COCONUTS.

50. The price of copra was $12.50 a pikul in January. It went down to $10.50 in April and recovered to $13.65 in October. At the close of the year the price stood at $13. Exports of copra from the Federated Malay States were 55,197 tons valued at $9,641,012 as compared with 49,037 tons valued at $8,190,701 in 1923.

OIL PALM.

51. Considerable interest is being shewn in the possibilities of the African oil palm, as a large scale plantation crop. At the end of the year the area in the Federated Malay States under this form of cultivation was nearly 6,000 acres. A number of applications, principally in Selangor, have been approved, on pioneer terms, for this purpose. During the year a modern factory for extraction of palm-oil was erected on Tennamaram Estate in the Kuala Selangor district. Nearly 300 tons of palm-oil were exported from the Federated Malay States during the year.

RICE.

52. A large rice mill at Kuala Kurau, Perak, was bought by the Government in pursuance of its policy of safeguarding its food supplies and encouraging the production of rice. The 1924 padi harvest was up to average in Krian and Negri Sembilan. In Pahang and Selangor some damage was caused by heavy floods and the harvests were a little below average. The 1925 harvest promises well in all the Federated States. Selected seed from the Titi Serong Experimental Station is now eagerly sought by padi planters in all rice growing districts. Small experiment stations, conducted on the lines found so successful at Titi Serong, have been established in all States of the Federation.

GOVERNMENT EXPERIMENTAL PLANTATION, SERDANG.

53. Interesting and satisfactory work continues to be done at the Government Experimental Plantation at Serdang.

VARIOUS FORMS OF CULTIVATION.

54. The area under different forms of cultivation is, in acres, as follows:

State.	Padi.	Coconuts.	Rubber.	Kampong fruit.	Total.
Perak	104,188	91,930	427,358	84,969	708,445
Selangor	20,819	90,799	409,072	26,321	547,011
Negri Sembilan	31,838	17,604	278,040	22,151	349,633
Pahang	30,504	14,743	116,787	62,881	224,915
Grand total ...	187,349	215,076	1,231,257	196,322	1,840,004

The corresponding figures for 1923 were 194,861; 215,228; 1,230,841; 208,685; 1,849,615 in acres.

PLANTERS LOANS BOARD.

55. During the year the Planters Loans Board dealt with fourteen applications for a total of $376,300. Of these, five were approved for a total of $89,500. Repayments made amounted to $724,058. Approved loans for $2,386,537 were outstanding at the end of the year.

WAR SERVICE LAND GRANTS.

56. Under the scheme for War Service Land Grants (Federated Malay States), administered by the Loans Board, 119 persons benefited as against 133 during 1923, 14 recipients having settled their liabilities. At the end of the year approved loans totalled $2,867,750, of which sum $1,461,900 had been paid out to beneficiaries under the schemes for development of their properties.

VII.—LEGISLATION.

57. No important legislation was enacted during the year, and of the twenty-five Enactments passed the majority merely effected amendments in existing laws. The most noticeable of these was perhaps an amendment to the Courts Enactment to increase the jurisdiction of Magistrates. The importance of the rubber restriction policy was marked by a repeal and re-enactment of the former laws relating to export of rubber and to rubber dealers, the new Enactments being entitled Rubber Restriction and Rubber Supervision. The Volunteer Enactment was repealed and re-enacted in a form more resembling the Colonial law, and new Savings Bank and Post Office Enactments were passed, the latter becoming a Federal Enactment. The law dealing with printing presses was strengthened and brought into line with the law in force in the Colony; and the Country Lands (Cultivation) Enactment, over the interpretation of which there had been a certain amount of controversy, was repealed. Provision was made for a purely optional registration of Hindu marriages, and a short Enactment, in accordance with the declared, and accepted, policy of "decentralisation", was passed to enable the Chief Secretary to Government to relieve the Residents of some of the many formal applications for his approval which are required by existing laws.

VIII.—POLICE.

POLICE.

58. The approved strength of the Force on the 31st December, 1924, was 4,001 officers and men distributed in 178 police stations and 11 police posts. The stations of Ulu Klang and Bukit Kota were abandoned during the year and new posts were established at Banir and Manchis. The Force was 46 under approved strength at the end of the year, the shortage being almost entirely in the Detective Branch. Discipline was well maintained and recruitment was satisfactory. Refresher courses instituted in 1923 have been continued with satisfactory results. Training in the military side leaves little to be desired but there is room for improvement in police education proper. The experiment of manning two police districts (Port Dickson and Mantin) entirely by Malays proved successful and is being continued. The expenditure of the Force was $2,811,035 and its revenue $198,692.

CRIME.

59. There was a slight increase in seizable crime, the number reported being 8,508 as against 8,473 in 1923. The number of murders is 89 as in 1923. There was a marked decrease in gang-robbery (from 61 to 43) and in robbery (from 83 to 65). In house-breaking there was

an increase (from 150 to 198). The robbery figures continue to decrease. The country as a whole was very quiet and there were no serious outbreaks or organised crime to be dealt with. The Criminal Registry dealt satisfactorily, and expeditiously, with large numbers of enquiries, among which 1,184 cases of sudden or suspicious death were investigated. A comparison of numbers of the more serious offences against property in 1924 with those committed in 1904, when the Criminal Registry was inaugurated, is shown below. The figures are remarkable, and the diminution in serious crime is ascribed to the success of the Government's policy of banishing the alien criminal class of thieves and robbers:

	1904.	1924.
Gang-robbery	236 ...	43
Robbery	422 ...	65
House-breaking	403 ...	198
Theft (serious)	656 ...	224

MR. W. L. CONLAY, C.B.E.

60. During the year the Force lost the capable guidance of the Commissioner, Mr. W. L. Conlay, C.B.E., who retired on pension on the 15th November after a service of 31 years. The late Commissioner, whose first service was with the Perak Sikhs, was for a time an officer of the Civil Service and was the first British Agent in Trengganu. He was an extremely able Police Officer with a particular talent for organisation. He was responsible for the establishment of the Criminal Registry which is one of the best of its kind in the Empire, the system of finger-print identification in use having been devised by Mr. Conlay himself. He devoted a good deal of time during the latter portion of his service to the preparation of the necessary books of orders and instructions for the Force which he left very well provided for in this direction. The King's Police Medal was granted to him soon after his retirement.

IX.—PRISONS.

61. There are seven prisons. On the 1st January, 1924, there were 1,266 prisoners against 1,507 on the 1st January, 1923; during the year 6,513 were admitted; and 1,194 remained at the close of the year. The daily average figures were: Civil Prison, 143; short-sentence and revenue grade, 633; long sentence and condemned, 520. Six executions were carried out. Two prisoners escaped. Two prisoners committed suicide. The daily average of sick was 2.22 per cent. as compared with 3.22 in 1923. There were 16 deaths, of which 1 was from phthisis, 2 from pneumonia and 13 from other causes, of which debility may be presumed to be the cause or predisposing factor.

62. The total expenditure of all the prisons was $434,937. The daily average of 1,296 prisoners was maintained at a nett cost of $397,446 (the prison revenue being deducted) giving an annual cost per head of $307. The annual cost in 1923 had been $289 and in 1922, $282. The reason for the annual increase of $18 over nett cost of prisoner in 1924 is that the decrease in the daily average does not and cannot result in a proportionate decrease in the costs of maintenance.

X.—MEDICAL.

(i).—VITAL STATISTICS.

STATISTICS.

63. The estimated population at the end of June, 1924, was 1,418,455. There were 39,512 births, and 33,585 deaths: the rates being 27.86, and 23.68, per mille, respectively. The death-rate is the lowest on record; and this is the third consecutive year in which records have been established. There were 7,137 deaths of children under the age of one year, being an infantile mortality rate of 180.53 per mille, which is practically the same as that of the preceding year.

(ii).—PUBLIC HEALTH.

MALARIA.

64. Malaria always heads the list as the most important cause of sickness and death. The number of deaths registered as being due to "fever" was 14,283 (10.07 per mille). The figures for 1923 and 1922 had been 15,516 (11.17 per mille) and 15,570 (11.44 per mille), respectively. This year's rate is the lowest on record. In the State of Selangor, the death-rate for malaria has dropped, in six years, from 20.29 per mille to 7.70 per mille. I take the following passages from the annual report of the Senior Health Officer:

> "Experience gained during the year in no way tends to modify the view expressed in last year's report, that malaria prevention by anopheline reduction is (when done in the right way) a sound economic problem where persons are grouped together in towns, villages or estates.
>
> "The Government's machinery for promoting efficiency in anti-malarial operation consists of the Malaria Advisory Board, the Mosquito Destruction Boards in co-operation with and assisted by the Health Department, the Malaria Bureau and the Anti-Malaria Engineer.
>
> "The Malaria Advisory Board is a Central Committee formed for the purpose of collecting information with a view to advising generally as to the methods which should be adopted for the control of malaria. The Principal Medical Officer is the Chairman of the Board and both officials and non-officials are represented on it. During the year the Board met regularly, and the minutes were published.
>
> "The Mosquito Destruction Boards are local bodies with executive powers. Appointed by the British Resident for certain areas, they deal with the mosquito problems in their districts. Where possible the Chairman is the district Health Officer. The members comprise officials and non-officials. During the year each Board met as often as was necessary for the needs of its district. The executive staffs continued to perform good services. Minor works such as open ditching and oiling were carried out by the Boards staff under the supervision of the Chairman, major works such as sub-soil draining were for the most part performed by the Public Works Department under the supervision of the Executive Engineer who is ex-officio a member of the Board.
>
> "The Health Officer, Railways, is ex-officio a member of every Board through whose territories the railway runs. In this way close co-operation between the railway authorities and the district authorities has been secured.
>
> "Though good work has been done in many areas, the scheme devised by the District Officer, Port Dickson, and carried out by the staff of the Mosquito Destruction Board, of which he is the Chairman, deserves special mention. By good organisation and strict attention to the detail, excellent results have been obtained. The success attained here is an example of what can be done by a layman, when the advice of a Health Officer is available, and he has the proper staff at his disposal.
>
> "There can be no doubt that these Boards are of great value in keeping alive local interest in the mosquito problems, and in spreading a knowledge of the nature of malaria and the manner of its spread."

The Health Branch continued to carry out the free distribution of quinine, and issued 1,105,000 tablets for distribution to the public through the Police, the Education Department and the District Offices, in addition to the very large number distributed by the various travelling dispensaries. Malaria is, by law, a notifiable disease in the larger towns. In Kuala Lumpur, which, at the 1921 census, had a European population of 1,267, the number of cases reported in 1924 amongst Europeans was only 14: in 1923, the remarkably low figure of 5 only had been recorded. As these returns include all relapses, and all cases where the infection was incurred outside the area, the figures are a testimony to the health of the town. The excellence of the sub-soil drainage system of the suburbs of Kuala Lumpur has always evoked the admiration of the malariologists who visit this country.

PULMONARY TUBERCULOSIS.

65. There were 1,916 deaths against 1,934 in 1923, giving a rate of 1.35 per mille.

ANKYLOSTOMIASIS.

66. The Senior Health Officer reports that 90 per cent. of the population harbours ankylostomes, but that few show symptoms. All Indian labourers receive treatment for this disease on their arrival at the Immigration Camp at Port Swettenham.

YAWS.

67. The treatment of yaws by injections of arsenical compounds was continued during the year. A total number of 36,003 injections were given, and 23,380 patients were treated, as against 31,135 in the preceding year. The decrease is ascribed to the cures effected in the preceding years. The campaign must, however, be continued systematically for many years to come before a successful termination is achieved.

BERI-BERI.

68. The hospitals treated 991 cases of beri-beri with a death-rate of 12.10 per cent. as against 771 cases, and a death-rate of 13.87 in the preceding year. Good "under-milled" rice is put out by the Government rice-mills, but the highly polished, "over-milled", and imported rice is more attractive to the Chinese; and, as yet, our propaganda campaign on the subject of the connection between beri-beri and "over-milled" rice has failed to persuade the mind of the people.

VENEREAL DISEASE.

69. Injections of arsenical compounds are given at all Government hospitals and dispensaries. During the year under review 30,016 injections were given, as compared with 29,675 in the preceding year. An outdoor dispensary, at which especial, but not exclusive, attention is given to venereal disease, was opened in July in the centre of Kuala Lumpur town, and treated 1,186 cases of venereal disease. Any outdoor patient is treated at this place, and thus no stigma attaches to a visit to it.

LEPROSY.

70. The "Tai-fong-chee" treatment has been carried out at the Kuala Lumpur Leper Asylum throughout the year, with encouraging results. Of 270 lepers who have taken the treatment regularly for over three months, 203 have improved; and of 136 who have taken it for nine months and over, 117 have improved. About 50 of them are no longer recognisable to the public eye as lepers, and some of them, so far as can be ascertained, are bacteriologically negative. The Principal Medical Officer praises Dr. E. A. O. Travers, Medical Officer, for his admirable work at this asylum, and I wish to associate myself with the Principal Medical Officer in this commendation.

TYPHUS.

71. There were eighteen cases of typhus, none of them being fatal. This disease has been the subject of special study during the year at the Institute of Medical Research. It is referred to, at some length, in the Director's annual report, and further details will be given in

one of the bulletins issued by the Institute. There appears to be a sort of typhus which differs essentially from the ordinary type by reason of its low infectivity. It does not pass direct from one person to another, and there is no evidence that it is carried by lice. Possibly cattle ticks convey the disease.

CHOLERA.

72. There were during the year two distinct outbreaks of cholera at the Quarantine Camp, Port Swettenham. All the cases entered the country on immigrant ships infected in the Madras Presidency. There were in all 212 cases, with 82 deaths. The Medical Officers at the camp worked splendidly, and have been thanked by the Government. No cases occurred outside the camp limits; and the immigrants, when discharged, carried no infection to the estates to which they proceeded.

OTHER INFECTIOUS DISEASES.

73. There were six cases of smallpox, with one death [a most satisfactory return]; 43 cases, with 17 deaths, of diphtheria; and seven cases of cerebro-spinal meningitis, with four deaths. There was no case of plague.

VACCINATION.

74. The number of vaccinations was 78,407 as against 77,724 in the preceding year.

SEWERAGE.

75. No town in the Federated Malay States has a public water-borne sewerage system. The Senior Health Officer reports that there are many private installations which are working well, and that their number is increasing. There can be no doubt that this country is behind the times in this important matter of public health. The difficulty is partly due to the fact that the Sanitary Boards are not self-dependent financially, and that they have to rely upon the general taxation of the country as well as upon the local rates for their civic amenities. Any application from a Sanitary Board to install a public sewerage system would receive most favourable consideration, if the Board were prepared to levy an additional rate to cover interest, depreciation and maintenance charges.

INFANT WELFARE.

76. Excellent work has been done at the Infant Welfare Centres at Kuala Lumpur and Ipoh, where the Lady Medical Officers have won not only the entire confidence of the mothers and children but also their warm admiration and personal affection. Last year, when the movement was new, there was a prejudice against the "invasion of the home", but this has now entirely disappeared, and the nursing sisters and health visitors receive a hearty welcome in every house—even from the conservative old grandmothers.

PROPAGANDA.

77. Propaganda work by means of posters, pamphlets and hand-bills was carried out by the Public Health Education Committee, by the Malaria Advisory Board, and by the Infant Welfare Advisory Board throughout the year. Lectures on malaria, given in Malay, and illustrated by lantern-slides, were delivered throughout the country. They were all well attended, and great interest was shown by the audience. Lectures are now being given in Chinese in the mining camps and Chinese schools. Pamphlets and posters in four languages were issued throughout the year on (1) hook-worm diseases, (2) convulsions, (3) care of the teeth, (4) advice to nursing mothers, (5) leprosy, (6) spitting, and (7) consumption; in three languages on the subject of venereal disease; in English and Malay on the subject of yaws and malaria; and in Chinese on the opium habit.

ESTATES HEALTH COMMISSION.

78. The Commission appointed to advise upon (*a*) the measures to be taken to improve conditions in regard to health, sanitation and prevention of disease on estates, (*b*) the system of estate hospitals and nursing and medical attendance therein, and (*c*) the system of visiting estates by medical practitioners, submitted its report on the 24th October, 1924. The report has been published, together with a memorandum written by myself covering it. In accordance with the undertaking given in my memorandum, the Government is drafting a Bill, to be known as "The Estates Health Boards Bill, 1925," which will provide for the constitution of Boards for the improvement of the medical, health and sanitary services on agricultural estates and other places. The Board will be empowered to impose two separate kinds of cess, one in respect of curative work, and the other in respect of preventive work, mainly anti-malarial measures. The Government has announced its readiness to pay the anti-malarial cess not only in respect of all Government lands and Government reserves, but also in respect of all agricultural holdings of less than 25 acres, and in respect of all town and village lots, the Government, if it so desires, making a levy upon the actual proprietors of holdings, in exercise of powers conferred under the Sanitary Boards Enactment. Power is also reserved in the Bill for levying a cess upon mining properties. When this Bill becomes law, it should go very far to improve the health of the country.

(iii).—MEDICAL INSTITUTIONS.

HOSPITALS, DISPENSARIES, ETC.

79. There were on the 31st December, 1923, in the Federated Malay States, the following medical institutions:

4 European Hospitals;
36 District Hospitals (each with an Outdoor Dispensary);
3 Women's Hospitals;
3 Leper Asylums;
7 Gaol Hospitals;
1 Quarantine Camp (for Immigrants);
4 Vagrant or Decrepit Wards;
1 Mental Hospital (Tanjong Rambutan);
1 Pasteur Institute (attached to the Institute of Medical Research);
14 Outdoor Dispensaries;
10 Town Dispensaries.

During the year there were 90,671 indoor patients as against 87,310 in the preceding year. Outdoor patients numbered 584,261 as compared with 527,414 in 1923, 433,111 in 1922 and 329,310 in 1921. The travelling (motor car) dispensaries, which patrol the roads, with regular programmes and time-schedules, are working very satisfactorily. They were started in 1922, and the large increase in the numbers of outdoor patients is due to them. The travelling dispensary boats on the Pahang River also did good work.

MENTAL DISEASES.

80. The only institution in the country for mental diseases is the Central Mental Hospital at Tanjong Rambutan. On the 31st December, 1924, the patients numbered 1,322 males and 423 females as against 1,183 males and 397 females on the corresponding day of the

preceding year. The total number of admissions was 477 males and 117 females. Of the form of mental disease on admission, primary dementia, recent mania, recent melancholia, and confusional insanity in that order, head the list. Of recoveries, recent melancholia, recent mania and confusional insanity, also in that order, show the largest numbers. There were 111 deaths, giving a death-rate of 5.96 on the total treated, and 6.66 on the daily average. This is the lowest on record. The principal causes of deaths were phthisis, dysentery and general paralysis of the insane. Dr. Samuels has extended his farms, which are such a feature of this admirable institution, to an area of 290 acres. All the vegetables consumed in the hospital are grown in the farms, and quantities of milk, pork and fruit are also supplied.

81. A Pasteur Institute was opened in August under the charge of Dr. A. N. Kingsbury. It is at Kuala Lumpur, and attached to the Institute of Medical Research. Fourteen patients (of whom six were Europeans) were treated. No fatality has occurred. Rabies, though present, has not been prevalent during the year.

PASTEUR INSTITUTE.

(iv).—RESEARCH.

82. Reference has already been made to the investigation of typhus fever. Melioidosis was further studied, and the detailed results have been published. The causative agent of the disease, *B. whitmori*, was studied at the Lister Institute, London, in confirmation of the results obtained here. The stability of insulin in tropical temperatures, and certain questions connected with diphtheria in Malaya were made special subjects of investigation. Dr. Fletcher continued throughout the year his work on behalf of the Cinchona Derivatives Committee of the Medical Research Council.

INVESTIGATIONS.

83. An investigation into an outbreak of malaria at Sabak Bernam, and a continuous observation, since September, 1921, on the seasonal prevalence of species of anophelines at Kent Estate, were completed during the year but publication is delayed by the absence on leave of Dr. Hacker. Captain K. B. Williamson is making a preliminary investigation into the reaction of mosquito-breeding waters, especially in the rice-fields, with a view to testing the theory that the degree of their alkalinity or acidity is a main factor in determining the species of larvae found in them. A start has also been made with the work of collecting algae and other water plants, and also water insects and fish, so as to correlate their presence with the presence or absence of anopheline larvae in general, or with that of particular specimens, and with the reaction of the water in which they occur. Probably it is the feeding habits of the larvae, rather than the egg-laying habits of the adult anophelines, that regulate their distribution in nature.

MALARIA.

84. Three numbers of "Studies" of the Institute were issued during the year, and comprised:

PUBLICATIONS.

No. 17. "Collected Papers on Beri-beri," by A. T. Stanton and H. Fraser.

No. 18. "Notes on the Treatment of Malaria," by W. Fletcher.

No. 19. "Dysentery in the Federated Malay States," by W. Fletcher and M. W. Jepps.

The "Bulletins," which contain shorter articles, and progress reports of investigations which, on completion, may form the basis of a monograph, contained:

No. 1. "Rectal Injections of Quinine," by W. Fletcher.
No. 2. "Concerning Rabies and Pasteur Treatment," by A. N. Kingsbury.
No. 3. "The Practical Microscopic Diagnosis of Dysentery," by F. G. Haughmont.
No. 4. "Beri-beri and Rice Control in Malaya," by C. E. Cobb.
No. 5. "Melioidosis, a Disease of Rodents Communicable to Man," by A. T. Stanton and W. Fletcher.

XI.—EDUCATION.

FINANCIAL.

85. The expenditure upon Education (including $440,111 spent by the Public Works Department on the building and upkeep of schools) was $2,463,920. Of this sum, $514,424 was paid in grants to English aided schools and $32,732 in grants to Chinese vernacular schools. The total revenue, derived mainly from school-fees, was $67,404. An education rate of 1 per cent. in Sanitary Board areas produced only $98,690.

STAFF.

86. For the first time since the Great War it became certain that a regular supply of recruits for the senior staff can be secured. A revised scheme of salaries for local teachers was introduced.

HIGHER EDUCATION.

87. At present the highest local educational institution open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore. Raffles College, the building of which will start in 1925, will provide a higher education in subjects other than medicine. The Malay College, Kuala Kangsar, receives probationers for the Government service.

ADVANCED CLASSES.

88. Evening classes were held in all the States. In Taiping the subjects taught were book-keeping and commercial English, and students were prepared for the London Chamber of Commerce Examination. In Seremban the subjects were shorthand and book-keeping. In Kuala Lumpur the curriculum comprised shorthand, book-keeping, typewriting, practical mathematics, building construction, machine drawing, magnetism and electricity, telegraphy and telephony, electrical engineering, workshop mechanics, surveying, engineering and art. Out of the 152 students who joined these Kuala Lumpur classes, 114 were employed in Government departments, 25 in mercantile offices and the rest were unemployed. Divided by race, there were 109 Indians, 26 Chinese, 9 Eurasians and 8 Malays. There were Normal Classes for teachers in all the States except Pahang and there was an Art Class for them in Selangor.

SCHOLARSHIPS AND FREE EDUCATION.

89. Of the 12,754 pupils in English schools, 258 held Government scholarships, enjoying free education, board and lodging; 19 held other scholarships; 2,264 received free education from the Government and 541 free education from other sources. Thus, 3,082, or 24.16 per cent., receive a free education. All pupils in Malay vernacular schools enjoy free education.

ENGLISH SCHOOLS.

90. There were 19 English Government schools for boys, 14 English grant-in-aid schools and 11 for girls. The total average enrolment was 3,820, 6,434 and 2,500, respectively.

EXAMINATIONS.

91. At the Cambridge University Local Examinations held in December, there were 357 successes against 323 in 1923. In the higher examination 102 boys and 16 girls passed out of 202 and 35 entries; in the lower 255 boys and 20 girls out of 497 and 47 entries.

MALAY COLLEGE, KUALA KANGSAR.

92. The expenditure on the Malay College was $84,798. At the end of the year there were 125 students, all boarders educated and maintained entirely at Government expense. Nineteen students entered for the Cambridge School Certificate (formerly called the Senior Cambridge Examination), of whom 9 passed; for the Junior there were 21 entries and 10 passes. In the higher examination one Perak boy obtained honours with distinction in History and Malay, and another, a Negri Sembilan boy, gained distinction in English and Malay. In the Junior Examination a Kelantan boy obtained distinction in History. Two out of the three probationers passed the higher examination. The general health of the boys was satisfactory.

SULTAN IDRIS TRAINING COLLEGE.

93. At the beginning of the year there were 191 students and one probationer in residence at this College for the training of Malay vernacular teachers. After the Fasting Month 58 students completed their course and left and 100 new students joined. The total expenditure was $91,950, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. There were boys from every Settlement in the Colony and every Malay State under British protection except Johore. Three students died of pneumonia consequent on an epidemic of malaria. Otherwise the health of the students was excellent. Manual training plays an increasing part in the curriculum. A European Agricultural Instructor was appointed and this branch of education will be further developed. Poultry-farming was started.

MALAY VERNACULAR EDUCATION.

94. The Malay vernacular schools are all Government institutions and provide free education. There are 380 schools for boys and 62 for girls with average enrolments of 24,630 and 2,780. In addition to Malay Inspectors, the teaching staff numbers 1,161. The modern training of teachers, the introduction of manual training, and rural and domestic science are calculated to make these schools meet the fundamental needs of the Malay race.

TAMIL VERNACULAR EDUCATION.

95. There are 1,927 Tamil vernacular schools with an average enrolment of 7,010. An improvement in the quality of the teachers is reported. The inspecting staff was increased.

CHINESE VERNACULAR EDUCATION.

96. Two hundred and seventy-two Chinese schools were registered with 525 teachers and 12,175 pupils. The system of grants-in-aid for these schools, introduced in 1923, has made a satisfactory start. Out of 129 schools with 8,719 pupils eligible, 38 schools with 3,123 pupils applied for and were awarded grants. An important innovation was the creation of the post of the Assistant Director of Education for the supervision of Chinese vernacular education.

XII.—POSTS AND TELEGRAPHS.

POSTAL.

97. There are now 101 post offices and 44 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered exceeded 25 millions, an increase over 1923 of more than three millions.

MONEY ORDERS.

98. Money orders numbering 251,498 were issued and paid, the total amount representing $14,467,316, an increase of nearly two million dollars. Telegraph money orders numbering 8,780 for $701,329 were issued and paid. There has been a slow but steady increase in the number of orders issued on China. The number of telegraph money orders issued on India and Ceylon was over two thousand accounting for a total of Rs. 355,000. A code system was introduced in the exchange with India whereby the remitter was saved the cost of several words in the telegram of advice. The service with Netherlands East Indies has shewn very satisfactory progress. The telegraph money order service was extended to Johore on 1st February, and a money order agreement was concluded with Trengganu with effect from 1st April.

SAVINGS BANK.

99. A further remarkable increase of 2,893 took place in the number of Savings Bank depositors, the total now being 21,651. The average amount standing to the credit of each depositor rose to $102, an increase of $6. The number of withdrawals on demand (8,808) again more than doubled and there is little doubt that this facility has largely contributed to the increased popularity of the Bank whose clients have doubled in number since 1919, the amount of deposits having trebled since 1918. The excess of deposits over withdrawals in 1924 was $345,205. The number of Malay depositors has increased from 1,188 in 1920 to 4,098 in 1924.

"THE SAVINGS BANK ENACTMENT, 1924."

100. The law relating to the Savings Bank was revised and "The Savings Bank Enactment, 1924," became law on 17th April. The most important changes are the abolition of the acknowledgment from head office of deposits not exceeding $10, a stricter secrecy clause, provision for the making of rules for the transfer of deposits from one account to another, a simplification of the procedure in connection with the transfer of deposits from or to other Government Savings Banks and a forfeiture clause relating to illegal deposits.

TELEGRAPHS.

101. The number of telegrams despatched and delivered showed a decrease of nearly 70,000 or 8 per cent., the only important retrogression in the department's statistics. This may be attributed to the rapid development of the telephone system, and to the low rates charged for trunk calls, the decline being in *inland* telegrams. A similar state of affairs is observed in many other administrations.

TELEPHONES.

102. The total number of subscribers connected to the telephone exchanges at the end of the year was 2,436, an unprecedented increase of 226. There were also 1,249 extension circuits, extension bells and private lines maintained, an increase of 156. On 31st December, 1924, there were 2,463 miles of telegraph and telephone lines and 17,373 miles of overhead wires, of which 14,083 were telephone wires. In addition, there were 55 miles of cable, the length of the single line in the cables being 5,502 miles. These figures do not include railway wires and Federated Malay States Government wires in Johore. Ten additional public telephone exchanges were opened during the year at Gap, Bagan Serai, Parit Buntar, Semenyih, Utan Melintang, Sungei Siput, Nilai, Batang Malaka, Bahau, Pusing and a private exchange was established at Fraser's Hill. Many new trunk lines were established to connect these exchanges with the system, and to meet increased traffic requirements. Perhaps the most important of these

new trunk lines was that connecting Penang with the Federated Malay States system. The trunk telephone revenue was **$150,699** or **36** per cent. greater than in **1923**. The general telephone revenue has doubled since **1921**. There is every evidence that the public appreciate the economy of the telephone in their business and social affairs, and, with the return of prosperity, there is likely to be a period of extraordinary progress in this direction. A great effort has been made to overtake all the war-time and post-war arrears, and it may be said that by the 31st December this object had been attained.

MALAYAN TRUNK TELEPHONE SCHEME.

103. A comprehensive trunk telephone scheme designed to meet the public demand for telephonic communication between Penang and Singapore and the many intervening points in the Federated Malay States was submitted by the Acting Director, Posts and Telegraphs, in February, and referred to the Government of the Straits Settlements, which has the matter under its consideration.

FINANCIAL.

104. The nett revenue collected by the department was **$1,714,829**, an increase of **$74,881**. Annually recurrent expenditure amounted to **$1,571,989** and special expenditure (including **$98,292** on loan account) to **$128,936**. The value of the services performed free of charge for other Government departments, estimated at **$179,417**, is not included in these figures which also exclude temporary and acting allowances amounting to **$152,439**.

"THE POST OFFICE ENACTMENT, 1924."

105. The Post Office Enactment of **1905** was revised and brought up to date, the new Enactment having effect from **20th** September.

MALAYAN POSTAL SERVICES COMMITTEE.

106. On 30th June a Committee was appointed by His Excellency the High Commissioner to report what action, if any, was desirable to secure the most efficient and economical organisation of the Posts and Telegraphs Services of Malaya, the separate political entities of the Straits Settlements, Federated and Unfederated Malay States being duly preserved. The Committee took the evidence of the posts and telegraphs officials of the Straits Settlements and Federated Malay States, and, on the 15th September, submitted its report, which is still under the consideration of Government.

MALAYAN WIRELESS COMMITTEE.

107. The Malayan Wireless Committee met in Singapore on several occasions to discuss and report upon various wireless questions, including broadcasting and the issue of receiving licences. The final report has recently been completed and it is anticipated that temporary receiving licences will be available to the public in the immediate future, pending the establishment of broadcasting arrangements.

XIII.—PUBLIC WORKS.

GENERAL EXPENDITURE.

108. The total expenditure of the department was **$10,287,003**, and the cost of administration (**$1,422,443**) represented **13.82** per cent. of it as against **15.16** per cent. in **1923**. This figure does not take into account the fact that the services of the officers of the department are not confined to the department alone, but are frequently required by other departments, and Sanitary and other Boards. A saving on annually recurrent expenditure of **$519,764** has been effected, being more than sufficient to pay the salaries and allowances of the engineering staff.

WORKS AND BUILDINGS.

109. The annual maintenance of "works and buildings" cost $827,018, which represents 2.73 per cent. of the cost of the buildings. Four hundred and seventy-five new buildings were erected during 1924, the total number of buildings maintained by the department is 9,669, and their value is estimated at $34,968,278. The replacement cost would be far higher.

NEW BUILDINGS.

110. No buildings of any magnitude or importance were undertaken during 1924.

ROADS.

111. There are 2,504 miles of metalled cart-roads, 114 miles of unmetalled cart-roads and 1,924 miles of bridle-roads and paths. The average cost of maintenance per mile of metalled roads was $1,284 as against $1,178 in 1923. The total expenditure upon maintenance of roads, streets and bridges was $3,447 162 as against $3,126,270 in 1923.

RIVERS.

112. River maintenance cost $91,283 and extended over 267 miles of river.

ANTI-MALARIA WORKS.

113. The expenditure on revenue account upon anti-malaria works was $114,236 against a provision of $139,800, and the expenditure on loan account was $71,003 against a provision of $254,002. This expenditure does not include the general expenditure of the Mosquito Destruction Boards upon oiling.

WATERWORKS.

114. The capital cost of all the waterworks is $9,202,561, the maintenance cost was $185,572 and the revenue $366,838.

FRASER'S HILL.

115. The development of Fraser's Hill continued; the expenditure under loan account being $154,685 out of a provision of $175,323. The sum spent on maintenance being $45,435 out of a provision of $50,480.

LOAN ACCOUNT.

116. The provision upon the loan programme of works for the year was $7,958,778, but the expenditure was only $3,095,966.

XIV.—RAILWAYS.

WORKING.

117. The receipts from all sources were $16,210,202, an increase of 10.46 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $12,931,774, a decrease of .25 per cent. The nett receipts for the year's working therefore amounted to $3,278,428 compared with $1,710,349 in 1923. This represented 1.67 per cent. on the capital expenditure against .89 per cent. last year.

RAILWAY RATES.

118. A new scale of charges for all classes of goods traffic was introduced in January, 1924, providing increased basic rates for all classes, but reductions in the sliding scale for long-distance traffic. The fares for second and third class passengers were reduced on the 1st July, 1924, from 3¾ cents and 2½ cents to 3 cents and 2 cents per mile respectively, a return to the old standard rates for these classes.

PASSENGER TRAFFIC.

119. The number of ordinary passengers carried was 10,656,384 in 1923 and 10,814,586 in 1924. The number for the year therefore shews an increase of 1.48 per cent. over that for the previous year. The total receipts from passengers shew a decrease of $25,647 (.44 per cent.).

GOODS TRAFFIC.

120. Receipts from goods train traffic rose by $1,347,950 from $6,657,768 to $8,005,718, being an increase of 20.25 per cent.

CAPITAL ACCOUNT.

121. Expenditure on capital account is referred to in the prefatory note to this report. During the year the nett expenditure was $3,796,036 as compared with $5,183,234 in 1923.

KELANTAN SECTION.

122. On the Kelantan section, the line was opened for traffic as far as Kuala Krai (53 miles) and platelaying completed to the 63rd mile. Good progress was made with earthworks as far as Pergau (87 miles). The official opening of the Guillemard Bridge by His Excellency the High Commissioner (Sir Laurence Nunns Guillemard, K.C.B., K.C.M.G.,), the longest bridge in Malaya, took place on the 19th of July. The tunnels at the 69th mile were started. The expenditure during the year amounted to $1,388,696.

PAHANG SECTION.

123. Work was re-opened at the beginning of the year, and good progress was made with jungle felling and earthwork. Platelaying was completed up to 170th mile, and a Station opened at Chigar Perah (163rd mile) in August. Work commenced on the tunnel at 172nd mile. The expenditure during the year amounted to $476,613.

PRAI.

124. Work which had been carried out over a period of years upon the wharves, reclamations and dredging at Prai had been completed towards the end of July, 1923, when the alarming discovery was made that, instead of there being a depth, according to the contract of 30 feet or over the dredged area, there was not more than 24 feet of water on the bar at low-tide. The reason put forward was that the rate of silting had been far greater than had been contemplated. This discovery naturally affected all the Government's projects for the use of Prai as a harbour and a wharf. The Government was advised that it had no option but to settle in full with the Consulting Engineers and the Contractors, and it has accordingly done so. The difficulty with which the Government is confronted is in regard to its policy for the future. The Government is advised that the cost of dredging the harbour to, and maintaining it at, the depth, width and length originally estimated, would be absolutely prohibitive, and that any scheme for the reduction of the depth, width and length of the area to be dredged would make the harbour unattractive to steamers. The Government is carefully studying the problem of the rate of siltage. At a meeting of the Federal Council on the 23rd February this year, the Government introduced a resolution to the effect that, pending further information regarding the silting problem at Prai, it is undesirable to incur any further expenditure in connection with Prai Wharves, or with dredging the Prai Harbour Basin. The debate was adjourned until the next meeting of the Federal Council.

JOHORE CAUSEWAY.

125. The Johore Causeway was opened by His Excellency the Governor on the 28th June. The expenditure during the year amounted to $1,013,830. The Causeway is 60 feet wide on the top, and carries two tracks of railway and a roadway 26 feet wide. It has a total length of 3,465 feet. The greatest depth of the water is 77 feet, and the average depth 47 feet, at low tide. At the Johore end of the Causeway, provision has been made for the passing of small craft by means of a lock 510 feet long from end to end. The lock is provided

with a double set of gates spaced 170 feet apart, with a width inside the gates of 45 feet. The lock is crossed by a roller bridge, with three girders. The bridge is 57 feet wide, and carries the two lines of railway and the roadway. It weighs 570 tons, and it and the lock gates are operated electrically. In the construction of the Causeway, 1,641,712 cubic yards of granite were used. The total cost of the Causeway was approximately $12,250,000.

TELUK AYER GODOWNS, SINGAPORE.

126. The Teluk Ayer godowns at Singapore have not, so far, been a successful investment. The capital cost to the Government was $1,570,967. The cost to the Government last year was $99,331, made up of $17,600 for assessment, $80,016 for ground rent, and $1,715 for maintenance charges. The rent received was only $64,350. The total leasable area of this property is 298,496 square feet, of which only 128,700 square feet are let.

MINOR WORKS.

127. Work progressed on the New Engine and Carriage Sheds and Goods Yards at Ipoh and Seremban, Klang River Bridge, and on the doubling of the line between Batu Junction and Sungei Besi. A deviation at Kuala Kubu was completed. The total expenditure during the year amounted to $492,315.

RAILWAY BOARD.

128. The Railway Board held nine meetings during the year. It has four official and six unofficial members; and of the unofficials, one resides in Singapore and another at Penang.

PORT SWETTENHAM WHARF.

129. It is a matter for regret that the large wharf at Port Swettenham, intended for the use of ocean-going steamers, has been condemned, as the berthing of ships at the wharf is dangerous, owing partly to the erratic currents, and partly to the fact that shallow water is extended, thereby reducing the manœuvring space which had existed originally. The wharf is 1,000 feet long by 50 feet broad, and is erected on screw piles. It cost $2,050,000, and was completed in 1918.

DIVIDENDS.

130. The policy of the Government is that the railway should aim at paying 3 per cent. upon the open line, not only on the west coast but also on the east coast, except in respect of the section between Kuala Lipis and Chigar Perah. What is intended is not that, when the profits fall below 3 per cent., the charges of the department should be increased, but that, when 3 per cent. is exceeded, the charges should be reduced to the 3 per cent. level. In this connection, it is necessary to keep carefully in view the question of depreciation, which is very intimately connected with the whole question of the capital cost of the railway. The question, however, is really one of academic interest only, for in the past five years the nett profits upon the capital expenditure were 0.39 per cent. in 1920, 0.29 per cent. in 1921, 1.07 per cent. in 1922, 0.89 per cent. in 1923, and (as stated above) 1.67 per cent. in 1924. Having regard to the wealth of the country, the failure of the railway from the point of view of an investor affords a matter for grave and serious thought.

MOTOR COMPETITION.

131. The competition, especially over distances of about 30 miles, of the hired motor cars for passengers, and of heavy lorries for goods, is cutting into the railway receipts very severely. It is the policy of the Government that the public interests demand that no obstacles be placed in the way of this competition, and that the only requirement is that

the roads, of which the maintenance is already a heavy charge upon the general tax-payer, should not be unduly torn up by the fast and heavy lorries of private individuals. It is beyond doubt that all fair competition can only be met by the Railway Administration by the reduction of its charges both for passengers and freight. In this connection, it is a matter for regret that the Government decided some years ago upon a very expensive policy of doubling the railway line between Kuala Lumpur and Port Swettenham, and between Batu and Sungei Besi.

XV.—GENERAL.

PUBLIC TRUSTEE.

132. The year under review was the second year of the working of the Department of Public Trustee. The duties of the Public Trustee are (*a*) to act in the administration of estates of small value, (*b*) to act as an ordinary trustee, and (*c*) to act as a trustee appointed by the Court. During the year the Public Trustee accepted 11 trusts, the administration in 8 cases of the estate of a person deceased, and the deposit of 16 wills or copies of wills.

CO-OPERATIVE SOCIETIES.

133. The co-operative movement is still in its infancy, and is making good progress. Rural credit societies have increased from 6 to 20, and thrift and loan societies from 13 to 19. A number of societies is in process of formation. The total working capital used in the movement was $278,993 last year as compared with $73,461 in the preceding year. Public interest has been awakened, especially in the Malay peasant class, and the next year or two should see great developments.

EMPLOYMENT OF MALAYS IN CERTAIN GOVERNMENT DEPARTMENTS.

134. It is the policy of the Government to employ persons born in Malaya, and especially Malays, in the Government service, but hitherto, for various reasons, Malays have not been attracted to the Posts and Telegraphs and the Railway Departments. At my request, a special effort has been made by the heads of these departments, with the result that 76 Malays found employment during the year as clerks, telephone operators, postmen, etc., whilst the number of Malays in the Railway Department has risen during the year from 264 to 385. The scheme for training Malays as Station Masters which was started, by my instructions, in November, 1922, is working well. There are now 25 qualified Malay Station Masters in charge of stations, and 15 in training. Malays are replacing Punjabis as railway policemen, and are giving satisfaction.

MUNICIPAL.

135. The Kuala Lumpur Sanitary Board made during the year the very interesting and important decision to levy the general assessment upon the unimproved capital land value of property instead of upon its annual land value. The rate for 1925 is .75 per cent. per annum of the unimproved land value. It is a matter for regret that no progress has yet been made with the proposal to convert the Kuala Lumpur Sanitary Board into a Municipality.

HINDU MARRIAGE ENACTMENT, 1924.

136. A Hindu Marriage Enactment, 1924, was passed during the year to provide for the voluntary registration of marriages of persons professing the Hindu religion. The Enactment came into force on the 1st January, 1925.

LABOUR.

137. Returns of labour under section 82 of "The Labour Code, 1923," from 1,068 estates showed 119,242 Madras Indians, 30,884 Chinese, 4,516 Javanese and 4,715 other nationalities. The corresponding figures for 1923 were 121,463, 31,957, 4,791 and 4,894. In addition, figures show 18,895 Madras Indians, 2,039 Chinese, 152 Javanese and 2,497 other nationalities employed by Government departments. The total returns, from estates and Government departments combined, thus show 138,137 Madras Indians, 32,923 Chinese, 4,668 Javanese and 7,212 other nationalities.

THE MALAYAN PAVILION AT WEMBLEY.

138. The Malayan Pavilion at the British Empire Exhibition was not one of the least attractive to the general public. The building, though somewhat fanciful, was not without grace; and the interior, with a bright colour scheme, was both attractive and airy. A party of 19 Malays, including weavers, artisans, and general attendants, who all wore their full national dress whilst on duty were a successful feature of the pavilion; and the platforms on which exhibitions of handicrafts were given were always surrounded by a crowd. The Agricultural Department gave a comprehensive exhibit, including some excellent models, of which an ingenious model of a rubber tree in tapping deserves special mention. The exhibits of the Mines and the Geological Departments also included attractive working models, and were valuable both from an educative point of view and from that of the material information supplied to persons interested technically and financially. The Arts and Crafts Section was prepared by the Museums Department, and contained a beautiful and interesting display. A most gratifying appreciation of the Forest Section was received both from the general public and from persons interested in its technical and business side. Exhibits of timber, rattans, gutta-percha, damar, jelutong and minor forest products were included in the display. Forest Officers were brought into direct and frequent touch with manufacturers, with the result manufacturers obtained the most valuable information regarding the raw article as it first comes under human operation, and the Forest Officers obtained, in respect of the actual requirements of various trades, much information which they could not possibly have acquired in any other way.

FEDERAL COUNCIL.

139. The Federal Council was strengthened during the year by increasing the number of unofficial members from six to eight. The appointment of the Raja di Hilir of Perak and Towkay Wong Yick Tong, who were sworn in on 6th March and 28th July, respectively, followed on this decision.

WAR MEMORIAL.

140. On 30th March the Federated Malay States War Memorial at Kuala Lumpur was unveiled by His Excellency the High Commissioner in the presence of their Highnesses the Rulers. Detachments were present from the Cadets, the Malay States Volunteer Regiment, the Malayan Volunteer Infantry, Ex-Service Police, and the Royal Sussex Regiment. There was a large gathering of Ex-Service men and of the public. The memorial is of granite with bronze panels commemorating the names of those who left the Federated Malay States and fell in the Great War.

SPECIAL SERVICE SQUADRON.

141. H.M.S. "Hood" and "Repulse", comprising part of the Special Service Squadron under Vice-Admiral Sir Frederick Field, K.C.B., visited Malaya in February. The visit aroused great public enthusiasm, and thousands of men, women and children were given special facilities to avail themselves of the opportunity to go over these battle cruisers. A banquet given to Sir Frederick Field and his officers by the Chinese community was one of the most successful features of the visit. Admirable arrangements for entertaining our guests were made by committees in Kuala Lumpur and Klang, and the thanks of the community are due to these committees.

SUMMARY.

142. In my last annual report, I described the year 1923 as being one of convalescence and recuperation. I would say that 1924 has been one of steady and most satisfactory improvement. The country, however, despite the favourable trade balance referred to in paragraph 10 of this report, is still far from having recovered its normal strength. Clear evidence of this is seen in the fact that, though the tin-miners are doing very well, and the rubber-planters are satisfied with the present, and confident of the future, nevertheless there is as yet no life in the landed property market, and there is no building activity. I venture, however, to prophesy that it will come. Reverting to the simile, with which I opened this paragraph, I would say that this country was so dangerously enfeebled by the delay in administering the admittedly dangerous, but equally undoubtedly, successful remedy of "Restriction", that its recuperative power has been seriously affected. The delay extended over the period March, 1921, to November, 1922. I do not wish to be understood to comment upon the delay: I merely refer to the fact that there was delay; and my point is that during all that time this country was, from month to month, steadily losing its strength, and its reserve of strength. Without being unduly optimistic, I would express my opinion that 1925 will see a marvellous improvement in the patient. The bad years, through which we have gone, have taught us many things, and will be of lasting value to us. We know more clearly than before that we are far too dependent upon the exports of our raw material, rubber and tin; that our banking facilities and arrangements are not what they should be; and that every effort must be made to encourage the installation of local industries and to stimulate the production of foodstuffs.

W. GEORGE MAXWELL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
2nd May, 1925.

APPENDIX A.

FEDERATED MALAY STATES.

GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports. *	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218 §	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,1[illegible]8,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595 §	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999 §	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888 *	23,720	1,395,923	2,790,451 *	9,469,446 *	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005 ‖	122,962,929 ‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935 ‖	161,838,118 ‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113 ‖	219,943,686 ‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389 ‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282 ‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292 §	1921
1922	5[illegible],494,116	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	[illegible]952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	[illegible]0,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. * As now corrected. ‖ Excluding bullion and specie.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1924.

Dr. *Cr.*

	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96			(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922	36,000,000 00
		379,051 24			
Composition Stamp Duty, 6 per cent. Loan ...	552,321 42				
Composition Stamp Duty, 4½ per cent Loan ...	360,000 00				
		912,321 42			
Discount on Issue Price, 6 per cent. Loan ...	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan ...	1,800,000 00				
		3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00				
		801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan ...	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan ...	90,000 00				
		200,464 29			
Crown Agents' Commission, 6 per cent. Loan...	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00				
		200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00				
		197,404 28			
Miscellaneous — Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous — Stamps, etc., 4½ per cent. Loan	4,475 18				
		10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03				
		60,682 21			
			5,888,164 69		
To Loan Works—					
Public Works Department	7,708,531 79				
Posts and Telegraphs Department	538,446 84				
Topographical Survey Department	368,236 93				
Railways—Open Lines...	1,001,445 13				
„ Construction	21,931,954 33				
			31,548,615 02		
			37,436,779 71		
To Balance ...			42,748,934 58		
			$80,185,714 29		$80,185,714 29

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COLONIAL REPORTS, Etc.

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ANNUAL.

No.	*Colony, etc.*	*Year.*
1222	British Guiana	1923
1223	St. Vincent	,,
1224	St. Helena	,,
1225	Barbados	1923–1924
1226	Somaliland	1923
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84	West Indies	Preservation of Ancient Monuments, etc.
85	Southern Nigeria	Mineral Survey, 1911.
86	Southern Nigeria	Mineral Survey, 1912.
87	Ceylon	Mineral Survey.
88	Imperial Institute	Oil-seeds, Oils, etc.
89	Southern Nigeria	Mineral Survey, 1913.
90	St. Vincent	Roads and Land Settlement.
91	East Africa Protectorate	Geology and Geography of the Northern part of the Protectorate.
92	Colonies—General	Fishes of the Colonies.
93	Pitcairn Island	Report on a visit to the Island by the High Commissioner for the Western Pacific.

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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1925.

[*The value of the dollar is 2s. 4d.*]
[*A pikul is 133⅓ pounds av.*]

PREFATORY NOTE.

I.—HISTORICAL.

1. The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

2. British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

3. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Idris.

SELANGOR.

4. In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

5. In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874 anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

6. This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of

the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

7. In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

8. Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts

with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

9. In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

10. The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

11. In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire

for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, Their Highnesses the Sultans of Perak, Selangor and Pahang, His Highness the Yam Tuan of Negri Sembilan, the four British Residents, the Legal Adviser, the Financial Adviser, and eight unofficial members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

II.—GEOGRAPHICAL.

12. Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

13. Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

14. Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

15. Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

III.—CLIMATE.

16. The temperature of the West Coast of the Malay Peninsula has but small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from typical stations on the West of the Peninsula, where the South-West Monsoon is broken by Sumatra, show a decrease of rainfall from May to August. At Kuala Lipis on the east of the main range, there is a general rise in rainfall from February until May, succeeded in some years by a distinct drop in July and August; there is a further rise culminating in October and November, followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In the mountains the rainfall is high, particularly in the Larut Hills above Taiping where the average at "The Cottage" (Maxwell's Hill) for the years 1912-1925 was 274 inches. This station however is very exceptional, as the mean for other hill stations of approximately the same altitude is: Fraser's Hill (4,125 feet) 114 inches, Cameron's Highlands (4,750 feet) 126 inches, Gunong Tahan (5,640 feet) 145 inches. The district of Jelebu, which is shielded from the influence of both North-East and South-West Monsoons is by far the driest and has an average rainfall in the years 1891-1925 of 64 inches.

On the West Coast of the Peninsula the coastal stations are the driest, the average rainfall being about 80 inches. This gradually increases landwards, and the stations close to the foot of the main range of mountains show an average fall of about 125 inches. The opposite is true of the eastern side of the Peninsula where the coast stations show a mean of about 120 inches, due entirely to the heavy falls experienced during North-East Monsoon; and the inland stations showing a mean of about 85 inches.

Negri Sembilan, owing to the absence of high mountains, has the lowest rainfall of the States of the Federation, the average of seven stations being only 77 inches.

The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100° has never been recorded in the shade. The nights are cool. On the highest mountains, the temperature has been known to fall at nights to 46° Fahrenheit. In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only real strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally, they are of short duration and occur during the night.

IV.—STATISTICS.

17. The return, which forms the appendix to this report, shows for every year from 1889 onwards particulars of revenue, expenditure, imports, exports, duty on tin, duty on rubber, land revenue, railway receipts and population.

V.—POPULATION.

18. The census taken on the 24th April, 1921, shows that the population of the Federated Malay States was then 1,324,890, having increased since 1911 by 27.7 per cent. Of this population 853,528 are males and 471,362 females, the rate of increase since 1911 having been 17.7 and 51.1 respectively.

The Malay population rose from 420,840 in 1911 to 510,821 in 1921, an increase of 21.3 per cent. The rates of increase of the Malay population were 20.1 per cent. in Perak, 41.3 per cent. in Selangor, 11.3 per cent. in Negri Sembilan, and 17.3 per cent. in Pahang. The very high rate of increase in Selangor, where, in the Kuala Selangor district, the Malay population practically doubled since 1911, is due to the influx of foreign Malays, who have settled in the Coast districts to plant rubber.

The Chinese population of the Federated Malay States was 494,548 or only 61,304 more than in 1911. Practically the whole of this increase was in Chinese females, who now number 351 to 1,000 males as compared with 188 in 1911, and the lessening disparity between the sexes among the Chinese is gratifying as indicating a general tendency towards their permanent settlement in the Federated Malay States.

The rise in the Indian population was a marked feature of the 1921 census. In 1901, 58,386 persons of Indian nationality were enumerated; ten years later the number had risen to 172,465, the increase synchronising with the early development of the rubber planting industry, while in 1921 Indians in the Federated Malay States totalled 305,219. The percentages of increase since 1911 were 77.2 in Perak, 78.9 in Selangor, 84.4 in Negri Sembilan, and 31.4 in Pahang. More than four-fifths of the Indians in the Federated Malay States are Tamils.

The European population of the Federated Malay States rose from 3,284 in 1911 to 5,686 in 1921, of whom 93.2 per cent. are of British nationality. The most satisfactory feature of the census is that all the statistics, of sex, of marriage, of age and of birth place, show that the immigrant races, who have done so much to develop the resources of the Federated Malay States, are ceasing to look upon these States as a place of temporary sojourn and are tending more and more to make their permanent home here.

VI.—RAILWAYS.

19. The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines; the West Coast line runs North-North-West through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour—about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

20. The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, Kelantan. It is completed and opened for traffic as far as Chigar Perah Station, 23 miles beyond Kuala Lipis, the capital of Pahang, and 164 miles from Gemas. At the end of 1925, the permanent way had been laid as far as the 182nd mile. A section of 53 miles in Kelantan between Tumpat on the East Coast and Krai, is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Krai towards Pahang. The distance

from railhead in Kelantan to railhead in Pahang is 78 miles. Railhead at the end of 1925 was at the 68th mile and earthwork, etc., was in progress up to Kemubu, 96th mile. An extension—13 miles long—has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on November 1st, 1921.

21. Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang, work as contemplated on the wharves has been carried out. A causeway to carry two lines of rails and a roadway has been built across the Johore Strait connecting the Island of Singapore with the mainland.

22. The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,005 miles. The line is of metre gauge. On the mail trains on the West Coast main line, there are sleeping saloons and restaurant cars. There are 245 permanent stations and 30 flag stations. The expenditure on capital account (including lines not yet open for traffic) was $199,700,249 up to 31st December, 1925, of which $172,599,101 was met from revenue, and $27,101,148 from loan account.

VII.—HILL STATIONS.

CAMERON'S HIGHLANDS.

23. The development of Cameron's Highlands as a hill station has definitely been decided on by Government. The abandoned section of road between the 12th mile from Tapah, and Jor, at the 20th mile, is under reconstruction.

A first class motoring road has been traced as far as the pass into Pahang, at the 28½ mile, with a gradient of not more than 1 in 30 for the greater part of the distance, and a section of three miles with a gradient of 1 in 20. The survey is being continued towards the Highlands. The distance will be about 42 miles. A bridle-path, which will be about 11 miles in length, is being traced between Jor Camp and the Highlands. Development paths are being made inside the Highlands area. A topographical survey, with vertical intervals of ten feet, will be made next year. A development committee has been appointed under the chairmanship of the Director of Public Works.

FRASER'S HILL.

24. The road from the Gap was commenced in the year 1920 and finished in 1922. The Government has at present eight bungalows which are intended for the use of Government employees but which may be occupied by other than Government employees if there is a vacancy.

Another Government bungalow is now under construction. From Red Cross funds two houses have been built, "Red Cross House," which is primarily for the use of Ex-Service men and women, and "Cicely," where applications supported by a medical certificate receive priority. Two other buildings, "Convalescent" and "Victory House," are being built from the same funds. Three private houses have been built and building sites have been allotted to ten applicants. A water supply is being constructed. The golf links will soon be ready for use.

GUNONG ANGSI.

25. This is a small hill station containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

GUNONG TAHAN.

26. The establishment of a hill station at Gunong Tahan was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The rainiest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76°F. on three occasions, and the lowest minimum temperature 48°F. There appears to be no record of investigations into the area available for the residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

KLEDANG.

27. This hill is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

28. Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

ANNUAL REPORT, 1925.

I.—FINANCIAL.

Budget for 1925.

1. The estimates of revenue and expenditure for the year 1925 provided for a revenue of $66,892,813, and an expenditure (excluding capital expenditure, which was mainly to be met from loan moneys) of $64,518,306.

Actual Revenue and Expenditure.

2. The actual revenue for the year was $86,564,279 and the expenditure was $69,550,382. Thus the surplus was $17,013,897, against an estimated surplus of $2,374,507. The principal excesses as compared with the estimate were $8,893,578 under Customs, $1,873,022 under Excise, $1,246,218 under Licences, $1,069,350 under Fees of Court, etc., $1,288,484 under Interest and $2,743,352 under Railways. The largest savings in expenditure were: Railways, $1,339,105; Medical, $589,186; Public Works Department, $407,850; Education, $405,530; Posts and Telegraphs, $308,394; Public Works, Annually Recurrent, $273,232; and Municipal, $270,715. Excesses over estimated expenditure totalled $10,263,179, the only large item being $10,118,613 under Miscellaneous Services. The excess under this head of service included $10,000,000 set aside for the creation of a reserve fund for the replacement of Opium Revenue.

The Public Debt.

3. The public debt remained the same as at 31st December, 1924, namely, the Straits Settlements 7 per cent. Loan of $15,000,000, and the Straits Settlements Sterling Loan of (£9,355,000) $80,185,714, the first instalment of which (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) was issued in May, 1922, at 95, bearing interest at 4½ per cent. After deducting the expenses of issue, the proceeds of these two instalments amounted to $74,297,549. Of this sum, $41,035,527 has been spent upon Railway and other works, and the unexpended balance on the 31st December, 1925, was $33,262,022. The Sinking Funds, contributions to which commenced in 1925, amounted to $1,982,935. Investments specially earmarked, from the proceeds of the sale of tin, for the redemption of the Straits Settlements 7 per cent. Loan, 1926, amounted on the 31st December, 1925, to $15,011,806.

The Loan to Siam.

4. The Siamese Government Loan (£4,630,000) $39,685,714, which is repayable by 26 annual instalments commencing on the 1st January, 1924, has been reduced to $37,858,685 on 31st December, 1925, by the payment of the second instalment due on 1st January, 1925. As this loan is being repaid by equal yearly payments to include principal and interest, the principal part of the instalments will steadily increase.

5. The following statement shows the assets and liabilities on the 31st December, 1925:

Assets and Liabilities.

		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		33,262,022	10
Composition Stamp Duty Fund, 4½ per cent. Loan		280,789	75
Sundry Outstanding Accounts		930,975	62
Due to Kedah		266	88
„ Johore		717	34
„ India		572,427	64
Ceylon Agency Account		75,252	66
Family Remittances		4,347	88
Deposits—			
Courts	$282,736.58		
Forests	157,544.18		
Lands	395,077.65		
Postal	296,806.19		
Miscellaneous	952,555.09		
		2,084,719	69
Sundry Funds—			
Bailey Fund	$ 938.25		
Police Fine and Reward Fund	23,454.73		
Public Officers' Guarantee Fund	225,030.53		
Red Cross Fund	46,931.46		
Victoria Inst. Building Fund	79,700.08		
Miscellaneous	44,770.48		
		420,825	53
War Savings Certificates, 1924-1927 ...		19,901	27
Straits Settlements Government 7 per cent. Loan, 1926		15,000,000	00
Inter Treasury Accounts		15	00
Opium Revenue—Replacement Reserve Fund		10,000,000	00
Suspense		41,247	53
Capital Fund—Bagan Serai Rice Mill ..		382,429	73
„ Kuala Kurau „ ...		353,960	00
„ F. M. S. Government Factory		400,000	00
Surplus		69,210,447	86
		133,040,346	48

		$	c.
Cash in Treasuries and Banks as per distribution statement		6,771,393	18
Cash with Agencies—			
Crown Agents	$ 25,029.93		
F.M.S. & S.S. Joint a/c., India	34,148.73		
Malay States Information Agency	9,226.11		
Penang Agency	43,053.46		
Singapore Agency ...	917,912.78		
		1,029,371	01
Cash in Transit		588,821	86
Fixed Deposits		9,500,000	00
Advances at call and other temporary investments by Crown Agents	43,941,961.40		
Less Redemption Reserve...	58,264.90		
		43,883,696	50
Straits Settlements Government War Service Land Grant Scheme ...		6,591	98
Composition Stamp Duty Fund, 4½ per cent. Loan with Crown Agents ...		280,789	75
Bentong Tailings Retention Scheme ...		31,551	45
Due by other Governments—			
Ceylon	$ 205.53		
India	23,560.47		
Johore	438,501.28		
Sarawak	797.24		
Singapore	31,284.53		
Trengganu	10,412.25		
		504,761	30
Sundry Outstanding Accounts		777,906	17
Family Remittances		2,571	43
Investments (Surplus Funds)—			
S.S. Municipal Debentures (at cost)	7,300.00		
Sterling Securities ...	3,673,971.10		
		3,681,271	10
Investments specially earmarked for the redemption of Straits Settlements, 7 per cent. Loan, 1926 ...	15,034,020.83		
Less Redemption Reserve...	22,214.88		
		15,011,805	95
Investments (Specific Funds) (at cost):			
Bailey Fund	$ 938.25		
Police Fine and Reward Fund	21,226.75		
Public Officers' Guarantee Fund	191,696.02		
Red Cross Fund	46,555.36		
V. I. Building Fund ...	34,922.63		
Security Deposits a/c. ...	10,500.00		
W. & O. Contribution a/c.	5,025.00		
		310,864	01
Investments War Savings Certificates (at cost)		16,381	27
Loans—			
Siamese Government (*b*)	$37,858,684.94		
Unfederated States and Brunei	4,298,928.57		
Planters	689,003.92		
War Service Land Grant Scheme	1,740,970.17		
Miscellaneous	1,009,525.97		
		45,597,113	57
Advances		157,428	57
Imprests		72,104	73
Marine Slipway Account		34,767	34
Museums, Natural Products Account ...		1,000	00
Furniture making a/c., Forest Dept. ...		3,154	70
Timber Account—Forest Department ...		276,504	26
Rottan Account „ „ ...		5,715	65
Stores and Materials, Railways		2,104,131	34
„ „ a/c., Post Office ..		551,328	95
Stores and Furniture Account, P.W.D.		26,839	20
Stores Account, Marine Slipway ...		31,247	68
Sundry Assets		50,494	69
Suspense		594,349	11
Bagan Serai Rice Mill		382,429	73
Kuala Kurau Rice Mill		353,960	00
F.M.S. Government Factory		400,000	00
		133,040,346	48

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* V). The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of revenue.

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

Loans to Unfederated States and Brunei.

6. On 31st December, 1925, the State of Kedah had repaid the balance of its loan. The total loans to the Unfederated States and to Brunei amount to $4,298,929, and are made up as follows: Kelantan, $3,684,929; Perlis, $200,000; and Brunei, $414,000.

Surplus.

7. The surplus on the 31st December, 1924, was $52,196,551. As the revenue for the year exceeded the expenditure by $17,013,897, the surplus was increased to $69,210,448 on the 31st December, 1925. The statement in paragraph 5 above shows that the whole of this surplus is not represented by cash, but shows that advances at call, and other temporary investments with the Crown Agents together with investments of Surplus Funds have risen to $47,564,968 from $29,855,612 on the corresponding date in the preceding year.

Sterling Loan Capital Account.

8. . A statement of the sterling loan capital account is published as appendix B to this report. The sum of $80,185,714 (representing £9,000,000) has been raised; and the available balance, which had been $42,748,935 on the 31st December, 1924, was reduced to $33,262,022, on the 31st December, 1925, by the expenditure during the year on loan account.

II.—TRADE, CUSTOMS AND SHIPPING.

Companies.

9. During the year, 38 local companies with a total nominal capital of $19,285,166 were incorporated and registered as compared with 25 companies ($12,324,763) in 1924, 22 ($12,367,784) in 1923, 20 ($3,708,700) in 1922, and 30 ($4,988,000) in 1921. The objects of the companies were mining in 19 cases, rubber cultivation in six, rubber and coconut cultivation in one, oil palm extraction in two, ice and aerated water dealing in one, a cinema in one, the protection of dogs in one, and general trading in seven cases. The number of companies in liquidation in 1925 was 22, and during the year five local companies were struck off the register as defunct. There were 258 companies on the register at the close of the year.

Trade.

10. The aggregate value of trade for the year 1925 was $548,994,617, shewing the huge increase of $238,673,775 or nearly 77 per cent. as compared with the total for the year 1924. This value creates a record being $83,966,089 in excess of the figures for the trade boom year of 1920. This satisfactory state of affairs can, in my personal opinion, be ascribed almost entirely to the success of the Rubber Restriction Scheme. The distribution of trade per head of the population was over £46 as

compared with £30 for 1924. The total values of imports and exports including re-exports, bullion and parcels post, for the last six years are as follows:

	Imports.	Exports.	Trade balance in favour of exports.
	$	$	$
1920	175,916,712 ...	289,112,016 ...	113,195,304
1921	103,012,606 ...	135,485,376 ...	32,472,770
1922	78,822,349 ...	140,429,775 ...	61,607,426
1923	89,088,237 ...	197,100,950 ...	108,012,713
1924	97,436,302 ...	212,884,740 ...	115,448,438
1925	137,116,207 ...	411,878,610 ...	274,762,403

Distribution of Trade.

11. The distribution of the import and export trade, respectively, was as follows: Singapore 45.43 per cent. and 22.00 per cent.; Penang 23.31 per cent. and 29.75 per cent.; Malacca 1.13 per cent. and 3.30 per cent.; Unfederated Malay States 2.38 per cent. and 0.23 per cent.; United Kingdom 12.00 per cent. and 15.47 per cent.; British Possessions 5.47 per cent. and 0.72 per cent.; and foreign countries 10.28 per cent. and 28.53 per cent. The percentage distribution of imports has not changed materially from that of the year 1924, but the greater quantity and higher price of rubber exported direct to the United Kingdom and to the United States of America has caused a great change in the percentage distribution of exports. The percentage value of the export trade through Singapore and Penang was only 51.75 as compared with 71.26 of the previous year, whilst the direct foreign trade was 44.72 per cent. as against 25.60 per cent.

Revenue from Customs, etc.

12. The revenue from customs, excise and the chandu monopoly amounted to $44,364,216, and constitutes a record, being $9,332,474 in excess of the previous highest figure of $35,031,742 collected in 1924. Import duties aggregated $7,035,822, an increase of $1,375,901; export duties produced $22,953,267, an increase of $5,920,679; and excise duties, licences, etc., amounted to $1,815,778, shewing an increase of $306,898 as compared with the receipts for 1924.

Opium.

13. The nett revenue from the Chandu Monopoly was $11,942,811 as against $10,543,859 in 1924. This increase of roughly $1,400,000 is due to extra sales and these extra sales are due to the fact that the Chinese population was increased greatly by immigrants attracted to the country by the high wages offered on tin mines and rubber estates. I mentioned in the Annual Report for 1924 the experiment of opening Government

smoking saloons. That experiment was entirely successful, and gave encouragement to proceed with the work. By the end of the year under review not only had preparations been made to take over all smoking saloons throughout the Federated Malay States, but the scheme for retail shops was also completed, and the aim of the Government to have all sales of chandu conducted by Government officers has now been achieved. In 1926 no licences of any kind relating the sale of chandu will be issued. The "List of Customers" system, introduced in November, 1924, was continued throughout the year, no difficulty being experienced. The system was improved in several respects, and now affords valuable information.

14. Rubber smuggling was again the principal danger with which the Preventive Branch of the Customs Department had to contend, and it continued unabated until the end of November. The larger releases under the Restriction Scheme have left less available rubber for smuggling and have greatly reduced the incentive. Six motor launches for the prevention of smuggling were in commission throughout the year, and in addition the Selangor Government launch "Mina" was lent to the Customs Department for over ten months. Two larger and faster launches, the "Kedidi" and "Selanting," were launched and commissioned in December and another similar launch was nearing completion at the end of the year. An attempt was made at organised rubber smuggling from Federated Malay States by certain dealers having agents in Singapore, Selangor, Negri Sembilan and Pahang, but it was successfully dealt with and three of the ringleaders received deterrent sentences. The following comparative table gives the number of seizures, convictions, fines imposed and quantity of rubber seized for the whole restriction area during 1924 and 1925:

	No. of boats seized.	No. of persons convicted.	Fines imposed.	Quantity seized. Pikuls.
1924	69	225	$1,027,900	3,116
1925	284	715	$3,048,850	6,646

Shipping.

15. The number of ocean-going steamers, which called at Port Swettenham, was 481 with a tonnage of 1,898,804 against 413 with a tonnage of 1,578,503 in the preceding year. The clearances of local steamers were 690 with a tonnage of 434,110 against 622 with a tonnage of 316,086 in the preceding year. The vessels, other than native craft, which entered and cleared at the various ports of the Federated Malay States aggregated 11,659 with a total tonnage of 6,112,641 tons, as compared with 9,971 vessels and a total tonnage of 4,994,600 tons in 1924.

16. During the year, 153 bankruptcy notices were issued, 43 bankruptcy petitions filed, 29 receiving orders and 31 adjudication orders made. There was a decrease in the work over that of the preceding year, especially in Perak. One composition was approved by the Court: one order of committal was made; and one debtor was prosecuted and convicted. **Bankruptcy.**

III.—LANDS AND SURVEY.

17. There was at the end of the year in private occupation about 2,285,941 acres held under agricultural titles, and 188,477 acres held under mining titles. **Area under title.**

18. It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 14 per cent. is land in private occupation, 18.3 per cent. is forest reserve, and 67.7 per cent. is still State land, including land reserved for other purposes than forests. Much of the State land has no road or railway access. In the upper reaches of the Perak and Pahang rivers, there are still great areas of untouched forest. Of the State land and forest reserve, 10,475 square miles are more than 500 feet above sea-level, and, owing to the steepness of the ground, of little value for agriculture.

19. The land revenue (including $561,493 derived from land sales), amounted to $4,658,899 as compared with $4,135,321 (including $376,112 derived from land sales) collected in 1924. **Land Revenue.**

20. The cost of the Survey Department is summarised as follows: **Cost of Survey Department.**

	Gross Expenditure.	Reimbursement and Revenue.	Nett Expenditure.
	$	$	$
Revenue Account ...	1,201,053 ...	278,473 ...	922,580
Capital Account ...	249,340 ...	96,033 ...	153,307
	1,450,393 ...	374,506 ...	1,075,887

The amount recovered in Survey Fees was $200,947 but, as was explained last year, this forms no criterion of the value of work done. The nett expenditure of the various branches was: Revenue Surveys, $613,277; Topographical, $153,307; Trigonometrical, $56,098; Map Production, $74,561; Instrument Repairing, $17,908; and the Head Office, inclusive of all leave salaries, $157,737.

21. Surveys of 6,923 lots totalling 45,608 acres were made. This does not include forest reserves of which nearly 200,000 acres were surveyed. **Revenue Surveys.**

Topographical. 22. The work of the Topographical Branch was mainly confined to the survey of forest reserves: preparations were also made to continue the work of the standard one-inch map more systematically and with a larger organisation. Each year shows, more and more, the necessity of topographical maps prior to development, and the energies of this Branch for the next few years will be mainly confined to one-inch work in Pahang and in the east of Negri Sembilan. Orderly development is so very much assisted by having good maps on which to base the schemes that the cost, admittedly high in a forest covered country such as Malaya, is yet small in comparison to the saving effected on engineering schemes of all kinds. Approximately one quarter of the Federated Malay States has been surveyed on the one-inch scale. The present financial condition of the country has enabled the Government to increase the vote and it is hoped to complete another quarter during the next five years.

General. 23. A serious and systematic effort is being made by frequent inspections and by tests for increment and promotion to improve the standard of efficiency of the subordinate staff. This is part of a programme of reorganisation which has been going on for some time. The terms for Apprentices have lately been improved and a better class of recruit is now coming forward. This will further tend to efficiency. The maps produced continue to maintain the high level of clearness and artistic merit which characterises the work of that branch of the department.

Staff. 24. The authorised establishment list of European appointments in the department is 77, comprising 50 in the Federated Malay States, 9 in the Straits Settlements, and 18 in the Unfederated States. Four appointments are vacant.

IV.—GEOLOGY AND MINING.

Staff. 25. There are four European appointments in the Geological Department, and 30 in the Mines Department, including eight Inspectors of Machinery. All these appointments are filled.

Geology. 26. Good progress was made with the geological survey in South-east Pahang and Johore. Work in Kelantan had to be abandoned temporarily, and the commencement of the geological survey of Trengganu was deferred. In view of certain doubts which had been expressed, it was decided to settle, if possible, the succession of stratified rocks in Kinta by boring. The work was carried out by the Warden of Mines, Perak, and proved that the limestone is under the quartzites and schists.

Export of tin. 27. The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 45,926 tons compared with 44,043 tons in 1924 and 37,490 tons in 1923. The export of tin-ore represents about 83.9 per cent. of the total. The export duty (in millions of dollars) was $14 in 1925, $12.56 in 1924, $7.73 in 1923.

Price of tin. 28. The tin price remained comparatively steady throughout the year, and maintained a fairly high level. At the beginning of January it stood at $136.62 per pikul and rose to $141 during the first week; thereafter a downward tendency set in which was arrested on April 16th when the price was $116, the lowest price for the year. From April onwards a steady improvement occurred and the price rose to $145.50 on the 25th October, the highest price for the year. Slight fluctuations only were in evidence during the remainder of the year and at the close the price stood at $142.37½.

Fluctuation in price of tin. 29. The following table shows the fluctuations in the prices of tin for the last seven years in dollars per pikul :

—	1919.	1920.	1921.	1922.	1923.	1924.	1925.
	$	$	$	$	$	$	$
Highest ...	166.00	212.00	115.00	93.62	121.00	148.00	145.50
Average ...	120.68	150.67	85.04	80.64	101.75	124.19	131.77½
Lowest ...	100.00	90.00	72.00	71.75	88.50	100.75	116.00
Fluctuation	66.00	122.00	43.00	21.87	32.50	47.25	29.50

Labour. 30. The labour force engaged in mining (including dulang pass holders) was 115,049 at the end of the year. The figures for the preceding three years were : in 1924, 114,273; in 1923, 104,556; in 1922, 94,948. The total does not include labour employed on the extraction and transport of firewood. There was a marked shortage of labour especially skilled labour, caused by the rubber boom, the disturbed conditions in China and the increased demand by the mining community.

Tungsten. 31. The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin again showed an improvement and was as follows for this and the previous year :

	Wolfram.	Scheelite.
1925	131.48 tons ...	27.02 tons
1924	8.45 ,, ...	89.16 ,,

Gold.

32. The production of gold from the Raub Gold Mines (the only gold mine now working in the Federated Malay States) was 12,526 ounces as compared with 12,268 ounces in 1924. In addition alluvial gold was recovered in various places to the extent of 1,659 ounces.

Coal.

33. The production of coal from the Malayan Collieries Limited, Selangor, was 407,734 tons, an increase of 34,939 tons on the previous year. Consumption was as follows:

Federated Malay States Railways	50.25	per cent.
Mines	42.68	,,
Other local consumers	1.43	,,
Exported	.01	,,
Consumed on Colliery	5.63	,,
Total ...	100.00	,,

The Colliery was worked very successfully throughout the year, nothing untoward happening.

The Enggor Coal Syndicate, Limited, Perak, produced 350 tons of coal in 1925, of which 20 tons were given to the Federated Malay States Railways for testing purposes, 209 tons were sold to mines and 121 tons were consumed by boilers at the collieries. An output of 40 tons a day is expected.

Gravel pump mines.

34. The greatest activity was shown by the Chinese in opening up and working gravel pump mines, the number of which has considerably increased.

Mineral Ores Enactment.

35. The effect of the Mineral Ores Enactment has again been clearly marked by the reduction both of illicit mining and actual thefts of ore, only two of which, involving 3½ pikuls of ore, were reported to the police. Transport of ore is now carried out very frequently without any other guard than the bullock-cart driver.

V.—FORESTRY.

Staff.

36. At the beginning of the year there were 25 officers on the senior staff in addition to the Controller of Timber Supplies and the Timber Accountant. Four Assistant Conservators were appointed during the year and three others were under training at Oxford. One officer was on deputation throughout the year in Johore, and another in Kedah. The strength of the locally recruited English-speaking staff at the beginning of the year was 17, including two probationers who were subsequently confirmed in their appointments. During the year one officer died, three officers were undergoing technical training, and two probationers

were appointed. In spite of the growth of the trained staff in the last few years it is being found impossible to cope with the work that has to be done or to provide fully for necessary developments. It is therefore satisfactory to report that a scheme gradually to increase the staff recruited from Europe to 58 officers has been approved in principle by the Secretary of State, and that details are being considered by the Government. This number provides also for the possible needs during the next few years of the Unfederated States.

Reserves.

37. The total area of reserved forests at the end of the year was 5,088 square miles and a further 1,148 square miles have been notified as proposed reserves. It was estimated in 1920 that productive forest to the extent of at least 28 per cent. of the country was required to make the country self-supporting. We are still a long way from that figure; 18.3 per cent. has now been reserved, much of which consists of high hills, inland swamps, and other unproductive areas. On the other hand valuations that have been made during the past five years indicate that the forests are rather richer than was expected. Selangor, the western half of Negri Sembilan, and southern Perak, where most of the alienated land is situated, are in a by no means favourable situation. Further reservation will be chiefly in Pahang and northern Perak, which are unfortunately somewhat remote from the main centres of timber and firewood consumption.

Exploitation.

38. The prosperous condition of the tin and rubber industries, combined with the increased demand for timber and fuel which accompanies prosperity in those industries, resulted in a great shortage of labour in the forests. The price of timber rose to almost record prices, and at the end of the year the shortage of supplies was a serious embarrassment. Following on a report by the Controller of Timber Supplies, a committee was appointed to consider the whole question of the exploitation and conversion of timber. It submitted an interim report towards the close of the year, and it is hoped that its labours, when completed, will result not only in the maintenance of adequate supplies of timber at a fair price, but more economical working of the forests. The outturn of timber, fuel, and charcoal on which payment was made was 844,605 tons compared with 789,412 tons in 1924.

Damar (Resin).

39. The *damar penak* (resin) industry in Negri Sembilan continued to be successful, but diminished slightly in volume owing to the attractions of rubber-tapping. Prices rose and the

demand in Europe could not be satisfied. The settlement of Sumatra Malays at Langkap is now firmly established, and a second settlement is about to be formed at Sungei Kerangai. It is also hoped to settle Chinese tappers at Ulu Bendol. With the local Malays, damar tapping is subsidiary to agriculture; but the Chinese, it is hoped, will rely chiefly on damar for a livelihood, cultivating vegetable gardens in their spare time. In Pahang and Perak the damar tapping industry had at the end of the year almost ceased to exist. In Selangor it has never been started. It is somewhat disheartening that the expansion of the industry, the potentialities of which are enormous, and which would be of the greatest benefit to the local Malays, seems at present to be possible only with imported labour.

Jelutong.

40. The output of *getah jelutong* rose from 5,897 to 9,261 pikuls. Applications are continually received for new licences, but applicants have first to satisfy the Conservator that their product is of good quality and fit for human consumption. A formula for a coagulating and preservative agent has been provided by the Agricultural Chemist. The price of the product rose considerably during the year, and Government is probably not getting a fair return. Supervision is extremely difficult, and it is found that careless tapping has caused the death of a number of trees. Unless damage of this sort can be checked it will be necessary to consider whether an industry of great promise, which Government is prepared and anxious to leave to private enterprise, should not be taken over by the Forest Department.

Research.

41. Research greatly benefitted by the return to duty of Mr. Phillips, who was appointed Economist in 1924, and shortly afterwards proceeded to Wembley. His attention was given chiefly to the development of the rattan industry, and the progress made already indicates the desirability of extending the Economic Branch of the department.

42. The Forest Research Officer continued the work of previous years. Exploration of the forests was continued and a paper prepared showing the composition and value of the forests. A large collection of wood samples was prepared and arranged, and important additions were made to the herbarium. Chemical reports were received from the Imperial Institute and elsewhere on a number of minor products. The rough draft of the Manual of Commercial Timber Trees was completed, and progress was made with the special study of the most important group, the Dipterocarpaceae. Seasoning tests on keruing, an

almost unused but extremely abundant timber, was begun, and durability tests were continued; approval was also given to the purchase of an experimental impregnation plant. The measurement of trees in sample-plots was continued, and a report on the trees in the plots, with suggestions for certain changes in the sample-plot rules was submitted. Of far reaching importance is the allotment to the Forest Department of about 600 acres of land within easy reach of Kuala Lumpur for experimental plantations, and for the establishment of a properly equipped research institute and school. When the survey of the area has been completed its development will be proceeded with.

Financial.

43. The financial result of the year's working was a record surplus of $766,379 compared with a previous record of $742,571 in 1924.

VI.—AGRICULTURE.

European staff.

44. The establishment of the department comprises 36 European officers, being 27 Federal officers, six State officers, two officers in the Colony, and one in Johore. Four of the appointments were filled by temporary (locally engaged) officers, one of whom resigned at the end of the year. One Agricultural Field Officer left the service during the year on the termination of his agreement. The appointments of Assistant to Secretary for Agriculture, Assistant Economic Botanist and Assistant Entomologist were left vacant during the year.

Price of rubber.

45. The rubber market made an excellent recovery during the year, due partly to restriction of output and partly to increased activity in the motor trade, especially in America. The price of rubber opened at 67 cents per lb., and remained at about this figure until the end of March, when it rose steadily to $1.74 per lb. in the middle of July. The price then dropped fairly rapidly to $1.20 per lb., but rose again in October, and reached its highest point ($1.80 per lb.) in November. It then dropped 30 cents and finally recovered to $1.58 per lb. at the end of the year. The general prosperity which has been the result has had the excellent effect of estates and small holdings being cleaned up and maintained in good order. Another result has been the sale of a number of estates and the formation of new companies. Prices realised in these sales have been as high as $1,450 per acre. Whilst the prosperity of the plantation rubber industry has had the disadvantage of diminishing the attractions of oil-palm cultivation, it is satisfactory to be able to record that there has been but little tendency on the part of the Malays to neglect the cultivation of their padi fields.

Exports of rubber.

46. The rubber exported from the Federated Malay States during 1925 was 118,590 tons, including 2,292,282 gallons (4,180 tons) of latex, as compared with 94,731 tons (including 783,491 gallons of latex) in the preceding year. The export in 1923 had been 102,818 tons.

"Restriction."

47. The Export of Rubber (Restriction) Enactment was in force throughout the year: the releases for the four quarters of the third "Restriction" year (1st November, 1924-31st October, 1925) were respectively 50, 55, 65 and 75 per cent.; and for the last two months of the year under review the release was at the rate of 85 per cent.

Third "Restriction" year.

48. The "Standard Production" for the third "Restriction" year for the Federated Malay States was 159,874 tons. The classification was as follows, and for convenience of comparison, figures for the first and second restriction years are given:

	1925.	1924.	1923.
Estates over 100 acres	106,816	94,872	107,557
Holdings between 25 and 100 acres	10,741	9,420	10,793
Small holdings	42,317	36,990	44,000
Properties not assessed	—	982	—
Totals	159,874	142,264	162,350

Tapping.

49. Conservative systems of tapping are still in vogue, and consist chiefly in alternate day "V" tapping, or periodic systems of tapping and resting. Economy of bark and a lower incidence of diseases are two of the more satisfactory results. The Mycologist draws attention to the possibility of certain fungi becoming harmful under less conservative systems.

Rubber diseases.

50. "Pink" disease continues to receive careful routine treatment. It generally attacks young plantations, of which there is a comparatively small area at present. "Mouldy Rot" has appeared in new districts: the wet weather at the end of the year caused a vigorous recrudescence, which will probably subside with the dry weather. This disease is said to be satisfactorily controlled. The small holders are learning to recognise the value of proper treatment and control. Attention is drawn to the necessity for careful examination and treatment of root diseases, especially "Wet Rot" in the case of old trees. Cycles of this disease appear to occur.

Chemical investigations.

51. Investigations on the constitution of the non-caoutchouc constituents of latex have been continued by the Plant

Erratum Slip.

ANNUAL REPORT OF THE CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1925.

Page 25, paragraph 52, line 1, *for* "area under rubber" *read* "area of rubber in bearing".

Johore	450,000	,,
Kedah and Perlis	185,000	,,
Kelantan	33,000	,,
Trengganu	7,000	,,
Total ...	2,110,000	,,

New plantations of rubber.

53. A notification in the *Government Gazette* of the 20th February, 1925, contained statistics in respect of the area brought under rubber cultivation in estates exceeding 100 acres. For the whole of Malaya, the figures were as follows:

In 1918	81,437	acres
,, 1919	46,953	,,
,, 1920	51,053	,,
,, 1921	17,583	,,
,, 1922	6,732	,,
,, 1923 or later	12,532	,,

In May, 1925, the Hon'ble Mr. R. C. M. Kindersley, in his capacity as a member of a combined Dutch and British Committee appointed to investigate the position in regard to native rubber plantations in the Netherlands East Indies, received from the Rubber Producenten Vereeniging, and communicated to the local press, the following information in respect of the newly planted areas of large estates:

Planted at the end of 1920 ...	871,642	acres
Additions in 1921	40,054	,,
,, 1922	22,383	,,
,, 1923	10,560	,,
,, 1924	28,879	,,

No statistics are available either of Malaya or the Netherlands East Indies in respect of small holdings. It is known however that in Malaya very little rubber has been planted on small

Physiologist with useful results and increase of knowledge. Chemical investigations on raw rubber and preserved latex, the export of which is increasing, have been continued.

Area under rubber.

52. The following estimate of the area under rubber in Malaya in December, 1925, has been prepared by the Controller of Rubber and the Secretary for Agriculture. It is only an estimate, but it has been compiled with care from the figures at their disposal:

Federated Malay States ...	1,140,000	acres
Straits Settlements	295,000	,,
Johore	450,000	,,
Kedah and Perlis	185,000	,,
Kelantan	33,000	,,
Trengganu	7,000	,,
Total ...	2,110,000	,,

New plantations of rubber.

53. A notification in the *Government Gazette* of the 20th February, 1925, contained statistics in respect of the area brought under rubber cultivation in estates exceeding 100 acres. For the whole of Malaya, the figures were as follows:

In 1918	81,437	acres
,, 1919	46,953	,,
,, 1920	51,053	,,
,, 1921	17,583	,,
,, 1922	6,732	,,
,, 1923 or later	12,532	,,

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No statistics are available either of Malaya or the Netherlands East Indies in respect of small holdings. It is known however that in Malaya very little rubber has been planted on small holdings since the "slump", and it is understood that in the Netherlands East Indies the cultivation is of the "ladang" type.

Rubber Propaganda.

54. The Government, for years past, has contributed to the Rubber Growers' Association Propaganda Fund. On the 20th May last, the Federal Council agreed to set aside a sum equivalent to one-eighth of a cent per pound on rubber exported from the country, and to devote it to propaganda purposes. One-half of this amount was to be paid direct to the Rubber Growers' Association, and the other half was to be devoted to propaganda in Malaya and the Far East. A Federated Malay States Rubber Propaganda Committee was appointed, and a propagandist was engaged from England. He assumed duty in September, 1924, and soon afterwards visited China, India and Burma for the purpose of enquiring into the potentialities of those countries as markets for raw rubber and manufactured rubber goods. In his reports, he advised against propaganda campaigns being conducted in any of these countries, and relinquished his appointment in September, 1925. The unexpended balance of the local appropriation for 1924 was paid over to the Rubber Growers' Association Fund during the current year; and a similar proposal in respect of the unexpended balance for the current year is under consideration. It has been suggested that a certain proportion of this very large sum should be devoted to purposes connected with the "Rubber Roadways Committee" of the Rubber Growers' Association.

Rubber Research Institute of Malaya.

55. The Board of the Rubber Research Institute of Malaya was incorporated on the 1st September, 1925, by Enactment No. 8 of 1925. The Governments of the Federated Malay States, the Straits Settlements, Johore, Kedah, Kelantan and Trengganu co-operate in the scheme; and, subject to certain stipulations, the revenue of the Institute is being provided from a cess of 10 cents per pikul on all exports of rubber from these countries. The correspondence relating to the Institute has been published in a series of Federal Council Papers. The Board has an unofficial majority, and the appointments of the members of the Board have been gazetted. A considerable amount of preliminary work has been done, but the very important appointment of a Director has not yet been made.

Coconuts.

56. The price of copra was $13 per picul in January, it dropped to between $11.50 and $11.70 in April and later was maintained at between $12 and $12.40 per picul. The average price for the year was $12.15 compared with $11.95 in 1924 and $11.30 in 1923. About two-thirds of the exports are from

Perak, and most of the remainder from Selangor. Certain pathological or physiological diseases of coconut palms in Malaya and in other countries which still remain obscure are being investigated, and measures have been taken to deal with insect pests. Investigations indicate a considerable variation which appears to be hereditary in the yield of nuts.

57. The area under oil palm cultivation is increasing steadily, in spite of the setback due to the attraction of capital to extension of rubber planting. The total area planted in the Federated Malay States is now 8,644 acres compared with 6,544 acres (1924) 4,320 acres (1923) and 2,640 acres (1922). The development is so far principally in Selangor. Three estates have reached the producing stage. The erection of modern machinery on two estates has led to increased efficiency in extraction of palm-oil. Investigations were carried out on the bleaching of palm-oil as a substitute for imported ground-nut oil. It has been proved that the bleached oil is satisfactory for cooking purposes, if prejudices can be broken down. **Oil palm.**

58. The 1925-1926 padi harvest will be, in nearly all districts, below normal, due to unfavourable weather conditions. The yield in the Krian irrigation area last season exceeded 16½ million gantangs compared with an average of about 14 million gantangs over a series of years; this is due to (*a*) a good season in the locality, (*b*) extensive planting of heavy yielding strains, (*c*) comparative freedom from pests. Nine thousand four hundred and eighty-six gantangs of selected seed of several varieties, principally *seraup* and *radin* in the proportion of 2 to 1 were distributed in the Krian area during 1925 and it is estimated that nearly 30,000 acres were planted with selected seed in this district. Three thousand five hundred and ninety-two gantangs of selected seed, chiefly *radin* varieties, were distributed in other districts. Experimental work was continued at the Titi Serong Rice Experiment Station and crops above the average were obtained. Insect pests, due principally to delayed planting and excessive rains subsequently causing floods, were in evidence during the year. **Padi.**

59. A compilation of the areas under miscellaneous minor crops by the Agricultural Economist shows how far inferior in importance these are to the major crops of rubber, coconuts and padi. In the Federated Malay States these consist approximately of the following: oil palm (8,644 acres), pineapples (4,994 acres), nipah palm, exclusive of small holdings planted for attaps (2,000 acres), coffee (3,964 acres), tapioca (2,486 acres) and gambier (2,821 acres). These do not include miscellaneous fruits **Minor crops.**

in kampong areas. In addition there are small areas under tuba, kapok and areca (betel) nut. Attention is being directed to numerous miscellaneous crops at the Serdang Experimental Plantation.

Miscellaneous investigations.

60. Investigations in connection with jelutong (which is a forest product), tapioca (in connection with the cultivation of this crop for the production of power alcohol), nipah palm (for power alcohol) and the soils of rubber and coconut estates have been continued.

Serdang experimental plantation.

61. Experimental work in connection with numerous crops is continuing to develop at the Experimental Station, Serdang. The harvesting of several crops will be commenced shortly and should yield useful information on the economic value of these crops.

Government rubber and coconut Plantations.

62. The Government Rubber Estates at Pondok Tanjong and Kuala Tembeling and the coconut estates at Sapintas were transferred to the control of the Planters Loans Board. The two rubber estates were sold at good prices by the Planters Loans Board during the year.

Cinchona and tea.

63. An experimental area for the cultivation of cinchona, tea, coffee and sub-tropical fruits and vegetables has been selected at Cameron's Highlands, and a Superintendent engaged to commence operations.

Exhibitions, agricultural shows and conferences.

64. A very successful Agri-Horticultural Show and Trade Exhibition organised by the Malayan Agri-Horticultural Association was held in Kuala Lumpur and successful district shows were held in other centres in each State. The Government of the Federated Malay States exhibited oil palm and coconut products, pineapples and tapioca at the Nations Food Exhibition, London. Malaya was the only country within the Empire represented by an official stall and exhibit at this Exhibition. A successful conference of the Incorporated Society of Planters was held during the year.

VII.—LEGISLATION.

65. The total number of Enactments passed during 1925 was twenty-six. Twelve of these were amending Enactments, and five repealed and re-enacted the existing law. Of these five two, Deleterious Drugs and Opium and Chandu, were drafted and introduced in pursuance of the Government's undertaking to assist in carrying out the policy agreed on by the Opium Conferences held at Geneva under the auspices of the League of Nations. Similarly the amendment to the Women and Girls Protection Enactment included certain provisions required by the

terms of the White Slave Convention. The Female Domestic Servants Enactment, which was passed in identical terms in the Colony and the Federated Malay States, represents an agreed policy in the matter of what are known as "mui tsai". Of the amending Enactments the most important were :

(i) The Inventions (Amendment) Enactment, enlarging the term of a grant from 14 to 16 years, following the Patents and Designs Act, 1919, and providing for the registration of British Patents and automatic protection consequent thereon, as recommended by the Empire Patents Conference of 1922.

(ii) The Labour Code Amendment Enactment. This contained a number of important provisions, the chief of which was recognition of the principle that if a labourer is fit and presents himself for work suitable work must be provided or wages paid up to a maximum of 24 days in each month. An attempt was also made to secure for labourers employed by a contractor the benefit of any money admitted to be due upon the contract.

(iii) The Pensions Amendment Enactment, introducing the principle of reduced pension coupled with a gratuity, and a grant to the estate of an officer dying in harness, as recommended by the Colonial Office Pensions Committee.

The importance of the rubber industry is shewn by two measures, one an Enactment incorporating the Board of the Rubber Research Institute, which is being established for the purpose of research into and investigation of all problems and matters connected with rubber and the other an Unofficial Member's Bill incorporating the Board of Management of the Malayan Planters Provident Fund. This represents a scheme worked out by leading representatives of the industry to help the employees of planting companies in making provision for their future. None of the other Enactments passed call for special mention.

VIII.—POLICE.

66. The approved strength of the force on the 31st December, 1925, was 4,049 officers and men distributed in 178 police stations and 13 posts. New posts were established at Rahang and Ijok. The force was 105 under strength at the end of the year, of this shortage 63 were Malay rank and file. Of the 47 Gazetted Officers 9 are Malays and of the 81 Superior Officers Police.

23 are Malays. Training at the Police Depôt remained satisfactory and towards the end of the year showed a marked improvement in respect of police education as distinct from drill. Difficulty was experienced in obtaining Malay recruits.

Crime. 67. The state of crime was extremely satisfactory. Seizable offences reported or suspected decreased from 8,508 in 1924 to 7,374 in 1925. There were 83 murders compared with 89 in 1924. Gang robberies reported decrease from 43 to 18 in 1925 and robberies from 65 to 59. There was no organised crime. The total number of gang-robberies and robberies reported or suspected in 1925 was less than 19 per cent. of similar reports in 1921. The Criminal Registry was maintained at a high state of efficiency, and a total of 23,574 finger-print enquiries in respect of current crime were dealt with expeditiously. The finger-prints of 1,127 persons who had died by sudden or suspicious deaths were submitted during the year for identification and 75 identifications were established in this manner.

Fires. 68. There were 348 outbreaks of fires, in only two cases was the damage stated to exceed $10,000.

IX.—PRISONS.

69. There are six prisons. On the 1st January, 1925, there were 1,194 prisoners against 1,266 on the 1st January, 1924; during the year 5,300 were admitted; and 1,001 remained at the close of the year. The daily average figures were: Civil Prison, 113; short-sentence and revenue grade, 554; long sentence and condemned, 499. Eight executions were carried out. Four prisoners escaped. One prisoner committed suicide. The daily average of sick was 2.19 per cent. as compared with 2.22 in 1924. There were 18 deaths, of which one was from dysentery, 7 from phthisis, 1 from pneumonia and 9 from other causes, of which debility may be presumed to be the cause or predisposing factor.

70. The total expenditure of all the prisons was $437,897. The daily average of 1,166 prisoners was maintained at a nett cost of $390,524 (the prison revenue being deducted) giving an annual cost per head of $335. The annual cost in 1924 had been $307 and in 1923, $289. The reason for the annual increase of $28 over nett cost of prisoners in 1925 is principally due to the decrease in the daily average.

71. Papan gaol was closed on the 4th June, 1925, and is now in the charge of the Public Works Department.

X.—MEDICAL.

(i).—VITAL STATISTICS.

Statistics.

72. The estimated population at the end of June, 1925, was 1,447,243. There were 41,818 births and 34,153 deaths: the rates being 28.89 and 23.60 per mille respectively. The death-rate is the lowest on record; and this is the fourth consecutive year in which records have been established. There were 7,409 deaths of children under the age of one year, being an infantile mortality rate of 177.17 against 180.53 in the preceding year.

(ii).—PUBLIC HEALTH.

General improvement in health.

73. In spite of a year remarkable for heavy floods and increased opportunities for mosquito breeding, the health of the country continues to improve. Fevers, mostly malarial, were the cause of 14,377 deaths, being 42.09 per cent. of the total deaths as against 42.53 per cent. for 1924. Bowel complaints represented 5.6 per cent., tuberculosis 5.86 per cent., pneumonia 5.49 per cent. and convulsions 11.44 per cent. There has been a steady decline in the death-rate. The follow'ng figures are instructive. The year 1911 is chosen, because that was the year in which the Health Branch was founded:

Year.	Federated Malay States.		Kuala Lumpur Town.		Estates.	
	General Death-rate.	Fevers Death-rate.	General Death-rate.	Fevers Death-rate.	General Death-rate.	Fevers Death-rate.
1911 ...	39.11	17.47	39.02	9.87	62.90	Not known
1925 ...	23.60	9.93	15.31	1.46	11.95	3.28

Malaria.

74. The hospitals treated 23,056 cases of malaria, with 993 deaths, during the year, showing a death-rate of 4.3 per mille as compared with 18,045 cases and a death-rate of 4.72 per mille in 1924. The number of cases treated in hospitals shows an increase, but a slightly lower death-rate. The increase in malaria is probably due to a variety of causes. The increase in immigration due to the greater prosperity of the country, the increase in migration from place to place, and the unprecedented floods, without doubt, were all factors in the increase in the figures for malaria. It was found that anophaline larvae had been swept down from unprotected areas, into the lake in the public gardens in Kuala Lumpur, and some cases of fever were

traced to this cause. The number of deaths registered during the year as due to fever was 14,377, giving a death-rate per mille population of 9.93 which is the lowest ever recorded. Tablets of quinine to the number of 460,000 were issued to the various Health Officers for free distribution to the public through various departments, and also by the travelling dispensaries.

The Senior Health Officer, in his annual report, remarks:

> "Nothing occurred during the year to modify the opinion that malaria prevention by mosquito reduction is the right policy where persons are grouped together in towns, villages and on estates. The Mosquito Destruction Boards continued to serve a useful purpose. A number of towns and villages formerly malarious are now free from this disease—Gemas, once intensely unhealthy, is now healthy."

Pulmonary tuberculosis.

75. The number of cases of pulmonary tuberculosis treated in hospitals during the year under review was 2,571 cases, with 1,051 deaths, and a death-rate of 40.88 per mille, as compared with 2,375 cases, 1,037 deaths, and a death-rate of 43.66 per mille for 1924. The tuberculosis incidence is reported not to vary from year to year to any appreciable degree, and while the disease needs carefully watching there appears to be no occasion for alarm. The influx of infected Chinese immigrants is a possibility which requires consideration. The amount of tuberculosis is far less than in most tropical countries however. The question of sanatoria for consumptives has been carefully considered, but experience in other countries does not hold out much hope of advantage from them: and statutory notification of the disease has signally failed. It is hoped to concentrate cases of advanced tuberculosis in one establishment. All that can be done in the form of propaganda and education is being done by the Public Health Education Committee, but there seems to be no hope of finding and detaining early cases.

Ankylostomiasis.

76. A very great percentage of the native population harbours ankylostomes in small numbers, but it is stated that few have sufficient to give rise to symptoms. An experiment in mass treatment in small rural areas in the Kuala Pilah district is reported to have been successful. Further experiments will be made, and the result will be awaited with interest.

Yaws.

77. The treatment of yaws by injections of arsenical compounds was continued during the year. A total number of 32,396 injections were given, and 25,012 patients were treated. The campaign, which I started, against yaws has been very successful, but it must continue in force for many years to come before this disease is entirely eradicated.

Beri-beri.

78. The number of cases of beri-beri treated in hospitals was 906, with 98 deaths, with a death-rate of 10.81, as compared with 991 cases, and a death-rate of 12.10 for 1924. The prosperity of the country probably accounts for the lowered incidence and death-rate by reason of the additional vitamines in vegetable, fish and meat additions to the daily meal, but, in spite of all that can be done by educative propaganda to the contrary, more and more people eat polished rice, which is more attractive as a food, if less healthy as a diet.

Venereal diseases.

79. A total number of 30,655 injections of arsenical compounds were given at Government hospitals and dispensaries during the year. The first venereal disease clinic was started in Kuala Lumpur in 1923. The attendances in 1925 were 31,665. Clinics are being organised at Ipoh, Seremban, Taiping and Klang. The medical officer especially detailed for this service has done excellent work in lecturing throughout the country, and in organisation. Propaganda, pamphlets and posters issued by the Committee for Public Health Education have also been useful; and the hospital wards and clinics are used to educate the public as well as for treatment. It is necessary however to conceal the treatment centres by associating them with the town dispensaries in such a fashion that no patient suffering from venereal disease is labelled as such. It is hoped that there will soon be a chain of venereal disease centres throughout the Federated Malay States.

Leprosy.

80. The Tai Fong Chee treatment for leprosy was continued during the year with great success in the Kuala Lumpur Leper Asylum. Out of 533 patients, 491 are now taking the treatment regularly.

Other infectious diseases.

81. Forty-eight cases of tropical typhus were diagnosed at the Institute of Medical Research during the year. Agglutination reactions indicate that these are two distinct strains. The clinical symptoms of both appear to be the same. Three cases were fatal. There were 184 cases of cholera at the Quarantine Camp, Port Swettenham, with 63 deaths, representing a death-rate of 34.23 per cent. The total number of inmates of the Camp for the year was 49,529. The number of deaths from all causes was 206, giving a percentage of deaths of 0.42 per cent. The most modern methods of treatment were used. One fatal case of cholera was also recorded in Perak. There were 49 cases of smallpox with 10 deaths, 39 cases (with 9 deaths) of diphtheria, and 10 cases (all sporadic) of cerebro-spinal meningitis with seven deaths.

Vaccination.

82. The number of vaccinations during the year was 126,305 as against 78,407 in the preceding year. A large number of these were re-vaccinated in Perak and Selangor where there were outbreaks of smallpox.

Infant Welfare.

83. Infant welfare work continued to be a great success and the attendances at the clinics have greatly increased. The number attending at the clinics in Kuala Lumpur, Ipoh and Taiping for 1924 and 1925 were as follows:

Place.	1924.	1925.
Kuala Lumpur	16,238	23,134
Ipoh	10,257	15,523
Taiping	7,342	18,259
Total	33,837	56,916

A commencement in infant welfare work was made in Seremban, and it is hoped to open a centre in Telok Anson during the next year. The control of Infant Welfare Work is now under the Senior Health Officer. The centres are conducted by Lady Medical Officers with a staff of European Infant Welfare Sisters and Asiatic health visitors and nurses. Admirable work has been done and the centres are very popular.

Propaganda.

84. Propaganda by means of posters, pamphlets and advertisements in the local press issued by the Malaria Advisory Board, Committee for Public Health Education, and Infant Welfare Advisory Board, continued during the year. Lantern lectures on malaria, in Malay and Chinese, were given in schools, kampongs and mines throughout the Federated Malay States. Lectures illustrated by lantern slides on venereal diseases were given in Chinese, Tamil and other clubs. Exhibits of anti-malaria measures and infant welfare work were put up at Kuala Lumpur, Taiping and Ipoh. These exhibits were very popular and attracted great attention. They were visited by all classes. Pamphlets and posters in four languages were issued throughout the year on (1) rabies, (2) beri-beri, (3) how to use a mosquito curtain, (4) domestic hygiene, (5) advice on weaned babies, (6) hints to expectant mothers; in three languages on whooping cough; in Malay and Tamil the dangers of tetanus neonatorum. A very excellent illustrated brochure on anti-malaria work at Port Dickson by Captain Gammans, and one on "puru" (yaws) by Dr. A. Visuvalingam were published. A large number of the pamphlets and posters issued in previous years were reprinted and distributed.

(iii).—MEDICAL INSTITUTIONS.

Hospitals, dispensaries, etc.

85. There were on the 31st December, 1925, in the Federated Malay States, the following medical institutions :

4 European Hospitals;
35 District Hospitals (each with an Outdoor Dispensary);
3 Women's Hospitals;
3 Leper Asylums;
6 Gaol Hospitals;
1 Quarantine Camp;
4 Vagrant or Decrepit Wards;
1 Mental Hospital;
1 Pasteur Institute (attached to the Institute of Medical Research);
29 Dispensaries working in towns, distinct from hospitals;
3 Infant Welfare Centres;
2 Venereal Disease Clinics.

The number of in-patients treated during the year was 103,762 with a death-rate of 6.71 per mille as against 90,883 with a death-rate of 7.54 per mille in the preceding year. Out-door patients numbered 621,793 as compared with 584,261 in 1924 and 527,414 in 1923.

Motor travelling dispensaries continued to do very good work in the villages and along roadsides and the increased number of out-patients for the year under review is mainly due to these. Their programme is a fixed one, and villages are visited at stated hours on certain days in the week. They reach the rural population as nothing else has done and they are generally surrounded by a crowd of people at the halting places. They have proved so successful that their number will be added to in 1926. The travelling dispensary boats on the Pahang River continued to do very useful work, and they treated 16,931 patients in 1925 as against 9,817 in 1924.

Mental diseases.

86. The only institution in the country for mental diseases is the Central Mental Hospital at Tanjong Rambutan. On the 31st December, 1925, the patients numbered 1,145 males and 306 females. Primary dementia accounts for the largest number of admissions. There were 276 discharges in 1925 as against 232 in 1924. A large number of patients were discharged under bond, as "not improved". Recoveries number 177 against 201 in 1924, and the recovery rate is 31.88 against 37.99. The Medical Superintendent attributes the fall in the recovery rate to shortage of staff. Incurable admissions are increasing in

numbers. The farms continue to do very well and large and valuable quantities of foodstuffs are produced. Anti-malarial draining and oiling were carried out as usual during the year. There was a slight increase in the malarial incidence possibly due to the heavy rains and to some of the drains having given way at the joints. The maintenance rate was $172.96 per head per annum as against $174.23 for 1924 and $176.88 for 1923. Amusements, cricket, football, circus and cinema performances were given to the patients from time to time, and the sports were as great a success as usual.

Pasteur Institute.

87. The number of persons to whom pasteur treatment was given in 1925 at the Institute for Medical Research was 123, and of these 64 had been exposed to known infection. No deaths amongst those treated have been recorded. Had the pasteur treatment not been available, these 64 cases must have gone elsewhere at considerable risk, due to delay.

(iv).—RESEARCH.

88. Reference has been made elsewhere in this report to the investigation in tropical typhus fever. Melioidosis was further studied. A case was recognised in Saigon. Organisms isolated by Dr. Guerin proved to be identical with *B. whitmori*. It appears from observations that the disease has a wide distribution and that only the difficulty in diagnosis prevents more frequent recognitions of it. As the organism resembles that of glanders, attempts were made to infect horses which failed. During the year a natural infection was recognised in a horse imported from Australia six months earlier.

89. Dr. Fletcher continued his investigations in the treatment of malaria by secondary alkaloids of cinchona. Experiments were made with sera in dysentery cases. Interesting tests in the prophylactic use of serum from recovered cases of measles were satisfactory. Only a small percentage of inocculated persons developed measles, and those who did had mild attacks.

90. The investigation into malaria in rice fields proceeded during the year. It was found that the degree of infection in the Krian rice fields was slight. Seasonal and regional intensive surveys were made to determine the numbers and percentages of anopheline larvae in various places. Experiments were made in respect of the percentage of larvae in relation to acidity of water in rice fields. Investigations show that larvae or eggs taken from padi fields are capable of breeding out in other than padi water. The larvicidal powers of water insects and of rice fields fish were investigated, and experiments were conducted to

ascertain the larvicidal powers of the minerals from local mines. Rubber oil was proved to be an effective larvicide and its addition to solar and crude oils increased their power. The food of larvae was also the subject of enquiry.

91. The Institute of Medical Research issued three numbers of its Bulletin during the year, and a paper on Melioidosis by Drs. A. T. Stanton and W. Fletcher. Volume III ("How Oil Kills Anopheline Larvae" by Dr. H. P. Hacker) of the Malaria Bureau Reports also appeared. The officers of the Institute contributed a number of articles to various medical journals. **Publications.**

XI.—EDUCATION.

92. At the beginning of the year the number of European appointments in the Education Department, including administrative and teaching staff, was 30 for men and 8 for women. The taking over by Government of the Victoria Institution, Kuala Lumpur, increased those numbers during the year to 37 and 9 respectively. At the end of the year there were two vacancies for men and one for women, but owing to five European Masters being seconded to the Unfederated Malay States the actual number of vacancies for men was seven. **Staff.**

93. The expenditure upon Education (including $391,896 spent by the Public Works Department on the building and upkeep of schools) was $2,684,893. Of this sum, $510,681 was paid in grants to English aided schools and $39,117 in grants to Chinese vernacular schools. The total revenue, derived mainly from school-fees, was $82,481. An education rate of 1 per cent. in Sanitary Board areas produced only $97,327. **Financial.**

94. At present the highest local educational institution open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore. Raffles College, the building of which has been begun, will provide a higher education in subjects other than medicine. The Malay College, Kuala Kangsar, receives probationers for the Government service. **Higher education.**

95. Evening classes were held in all the States. In Taiping the subjects taught were book-keeping and commercial English, and students were prepared for the London Chamber of Commerce Examination. In Seremban the subjects were shorthand and book-keeping. In Kuala Lumpur the curriculum comprised shorthand, book-keeping, typewriting, commercial law, machine drawing, electrical engineering and workshop mechanics. Attendance at these classes was not so good as in the previous year. There were Normal Classes for teachers in all the States except Pahang. **Advanced classes.**

Scholarships and free education.

96. Of the 13,876 pupils in English schools, 332 held Government scholarships, enjoying free education, board and lodging; 39 held other scholarships; 2,581 received free education from the Government and 461 free education from other sources. Thus, 3,413, or 24.59 per cent., receive a free education. All pupils in Malay vernacular schools enjoy free education.

English schools.

97. There were 21 English Government schools for boys, 14 English grant-in-aid schools for boys and 10 for girls. The total average enrolment was 5,319, 5,875 and 2,682, respectively. There is no Government girls' school as yet.

Malay College, Kuala Kangsar.

98. The expenditure on the Malay College was $80,065. At the beginning of the school year, there were four probationers and 127 students, all boarders educated and maintained entirely at Government expense. During the year three of the probationers were appointed Malay Officers in the Government service, two boys became teachers in the Education Department and one a Probationer in the Forest Department, and two entered the Medical College, Singapore. The standard of work throughout the school showed improvement, and there was a decrease in the average age. The Cadet Corps, which was inspected by the Staff Officer to the Local Forces, was reported to be a well-trained and efficient corps, which reflected credit on all concerned.

Sultan Idris Training College.

99. At the beginning of the year there were 230 students and two probationers in residence at this College for the training of Malay vernacular teachers. After the fasting month, 72 students, who had completed their course, and one probationer left, and 107 new students and one probationer joined. The total net expenditure was $99,019, defrayed two-thirds by the Federated Malay States, and one-third by the Government of the Straits Settlements. The annual cost per head was $357. There were boys from every Settlement in the Colony and every Malay State under British protection except Johore. The health of the students was excellent. The curriculum includes gardening under a European Agricultural Instructor, basketry, simple carpentry and physical training. A cinemetograph was installed at the College for educational purposes.

Malay vernacular education.

100. The Malay vernacular schools are all Government institutions, and provide free education. There are 398 schools for boys, and 65 for girls, with average enrolments of 26,133 and 3,103. In addition to Malay Inspectors, the teaching staff numbers 1,197. The modern training of teachers, and the introduction of manual training and tuition in rural and domestic science, have effected a marked improvement, and the education now provided appears to be a really good one.

101. There are 235 Tamil vernacular schools with an average enrolment of 8,153. An improvement in the quality of the teachers is reported. The inspecting staff was increased, and the appointment of a European Inspector for these schools has been approved. Tamil vernacular education.

102. At the end of the year there were 330 Chinese registered schools, with 626 teachers and 15,409 pupils. The system of grants-in-aid for these schools, introduced in 1923, has made satisfactory progress. Grants to a total of $39,117 were given to 48 schools with 3,886 pupils. Part III of the Education Code, containing regulations for aided Chinese vernacular schools was published, and local text-books are in the course of preparation. Chinese vernacular education.

103. At the Cambridge University Local Examinations held in December, there were 412 successes against 393 in 1924. In the higher examination 129 boys and 10 girls passed out of 223 and 31 entries; in the lower 254 boys and 19 girls out of 440 and 64 entries. Examinations.

XII.—POSTS AND TELEGRAPHS.

104. There are now 101 post offices and 53 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered was nearly 27 millions. The maximum weight of a parcel in the parcel post service was increased from 11 lb. to 22 lb. in the inland service and in the exchanges with many other countries and the public was quick to take advantage of the extended facilities. Postal.

105. Money orders numbering 281,719 were issued and paid, the total amount representing $18,716,993, an increase of approximately thirty thousand in number and four and a quarter million dollars in amount. Telegraph money orders numbering 9,175 for $747,149 were issued and paid. The direct money order exchange with China started in 1924 shewed very satisfactory progress. Money Orders.

106. The number of savings bank depositors on the 31st December was 25,620, an increase of 3,969 during the year. The number of accounts has more than doubled since 1920. The average amount standing to the credit of depositors rose from $102 to $122 notwithstanding the large number of new accounts. The excess of deposits over withdrawals during the year was $865,541. The number of Malay depositors increased from 4,098 to 5,238. The maximum amount allowed to stand to the Savings Bank.

credit of an ordinary depositor's account was raised from $2,000 to $5,000 and the whole amount may now be deposited at any time.

Telegraphs. 107. The number of telegrams despatched and delivered was 865,030, an increase of 120,578 or 16 per cent.

Telephones. 108. The total number of subscribers connected to the telephone exchanges at the end of the year was 2,827, a further unprecedented increase of 391. There were also 1,401 extension lines, extension bells and private lines maintained, an increase of 152. On 31st December, 1925, there were 2,561 miles of telegraph and telephone lines and 18,492 miles of overhead wires, of which 15,127 were telephone wires. In addition, there were 62 miles of underground cable, the length of the single line in the cables being 5,959 miles. These figures do not include railway wires and Federated Malay States Government wires in Johore. Four additional public telephone exchanges were opened during the year at Fraser's Hill, Raub, Sitiawan and Rantau. Many new trunk lines were established to connect these exchanges with the system and to meet increased traffic. The trunk telephone revenue was $212,844 or 41 per cent. greater than in 1924 and 92 per cent. greater than in 1923. The general telephone revenue was $696,782, nearly double the 1922 total. The resources of the department were taxed to the utmost to meet the urgent demands for telephone service. The number of telephone calls originated was estimated at 9,320,000 including 1,220,000 junction and trunk calls.

Malayan Trunk Telephone Scheme. 109. Preliminary investigations continued throughout the year with a view to furnishing data necessary to enable the Consulting Engineers to advise upon the Malayan Trunk Telephone (Cable) Scheme. The completion of a comprehensive scheme of trunk telephony for Malaya is becoming a matter of urgency and a vote of $1,000,000 as part of an established total cost of $4,500,000 has been entered in the budget for 1926. The data collected have been sent to the Crown Agents with a request that the advice of the Consulting Engineers be sought and that firm estimates of cost be furnished. There seems to be a misapprehension in the public mind in regard to this scheme. Telephone connection between Singapore and Penang is only an incident in the scheme, which is designed primarily to meet the immediate and future requirements of the Federated Malay States, where the demand for trunk service is rapidly outrunning the capacity of the existing system. The scheme will give all telephone subscribers in Malaya reciprocal trunk facilities.

Financial.

110. The nett revenue collected by the department was $2,046,694, an increase of $331,865. Annually recurrent expenditure amounted to $1,675,880 and special expenditure (including $428,181 on loan account) to $445,133. The value of the services performed free of charge for other Government departments, estimated at $184,162, is not included in these figures, which also exclude temporary and acting allowances amounting to $157,309.

Rules under the Post Office Enactment, 1924.

111. The rules and orders under the Post Office Enactment were completely revised, consolidated and issued at the end of the year, to have effect on 1st January, 1926. They included the new matter legislated for in the Post Office Enactment, 1924, and the changes necessitated by the Universal Postal Convention of Stockholm and by the International Insurance Agreement of Stockholm to both of which this administration is a party.

Malayan Postal Services Committee.

112. The report of the committee on co-ordination of the post and telegraph services of the Straits Settlements and Federated Malay States referred to in my last year's report resulted in the appointment in May of Mr. H. C. Sells, Postmaster-General of the Straits Settlements, as Acting Secretary for Postal Affairs, Straits Settlements and Federated Malay States. Mr. Sells has been engaged in drawing up a scheme of co-ordination, which is now under the consideration of the two governments, and in advising the governments generally.

Wireless.

113. The Malayan Wireless Committee met on several occasions. The issue of temporary licences for the use of receiving apparatus was commenced in April, and 28 such licences were issued. The department is keenly interested in the possibilities of the practical and commercial application of wireless in its services.

XIII.—PUBLIC WORKS.

General expenditure.

114. The total expenditure of the department was $12,105,518, an increase of $1,818,515 over the previous year. The cost of administration ($1,567,602) represented 12.95 per cent. of the total expenditure, as against 13.82 per cent. in 1924. In addition to work involved in connection with the preliminaries for various work in the programme provided for in the Annual Estimates, much work was done in the nature of investigations and enquiries connected with new proposals and approximate estimates for many schemes which may not materialize.

115. The unexpended balance on Annual Recurrent Expenditure was $671,928.

Works and buildings.

116. The annual maintenance of works and buildings cost $945,708, which represents 2.6 per cent. of the total cost of the buildings, as against 2.73 in the preceding year. Four hundred and eight new buildings were erected during the year. The total number of buildings maintained by the department was 10,020, the value of which is $36,355,327. Quarters for 12 Senior Officers and 192 Subordinates were completed.

New buildings.

117. The only new building of any importance was the New Electric Power Station, Bungsar Road, Kuala Lumpur. Work was commenced and good progress has been made.

Roads.

118. There are 2,537 miles of metalled road, 149 miles of unmetalled road and 1,852 miles of bridle-paths. The average cost of maintenance per mile of metalled roads was $1,308, as against $1,284 in 1924. The total expenditure on maintenance of roads, streets and bridges was $3,329,217. The total mileage of roads treated with bituminous compounds is 511 miles, of which 147 miles were added during the year. Considerable damage was caused to roads and bridges by floods and landslips over a wide area.

Rivers.

119. River channels of a length of 440 miles were maintained at a cost of $138,283. The unusually heavy rain during the year caused many rivers to flood. In Kuala Lumpur the greatest recorded flood occurred on 30th November, 1925: it exceeded the previous flood of March, 1917, by seven inches. The river inundated the town three times within a week, and the "padang" opposite the Government offices was several feet under water. Portions of the town of Ipoh were flooded by the Kinta River on several occasions.

Waterworks.

120. The capital cost of all waterworks is $9,267,035; the cost of maintenance for the year was $183,144, and the revenue collected amounted to $475,997.

Fraser's Hill.

121. The development of Fraser's Hill continued, the expenditure under Loan Account being $190,276 out of a provision of $260,596. The sum spent on maintenance being $70,219 out of a provision of $72,160.

Loan Account.

122. The provision under the Loan Programme of Works for the year was $9,800,667, the expenditure being only $4,720,001. The expenditure in 1924 had been $3,095,966 out of a provision of $7,958,778. I refer to this subject again in the general observations, with which I conclude this report.

Skilled labour. 123. The shortage of skilled artisans was very marked throughout the year: a large number of those men who left the country during the trade depression of 1921-1922 have not returned. Contractors were invited during the year to increase their force of skilled labour in view of the large programme of works under contemplation, but no improvement is, as yet, apparent, and many individuals with very little, if any, knowledge of their trade are demanding high prices for work which they are unable to carry out, even under supervision.

Subordinate staff. 124. The shortage of trained subordinates is still very acute. The Departmental Technical School was opened towards the end of the year, and 26 apprentices were enrolled; but it will be some years before the benefits to be derived from this school will be noticeable.

XIV.—RAILWAYS.

Working. 125. The receipts from all sources were $18,743,352, an increase of 15.63 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $13,973,036, an increase of 8.05 per cent. The nett receipts for the year's working therefore amounted to $4,770,316 compared with $3,278,428 in 1924. This represented 2.39 per cent. on the capital expenditure against 1.67 per cent. last year.

Railway rates. 126. There were no material alterations to the scale of rates and charges in operation during the year. The increase in both passenger and goods traffic can be attributed to the increased prosperity in the country.

Passenger traffic. 127. The number of ordinary passengers carried was 10,814,586 in 1924 and 12,552,621 in 1925. The number for the year therefore shews an increase of 16.07 per cent. over that for the previous year. The total receipts from passengers shew an increase of $955,140 (16.41 per cent.).

Goods traffic. 128. Receipts from goods train traffic rose by $1,135,624 from $8,005,718 to $9,141,342, being an increase of 14.18 per cent.

Capital account. 129. Expenditure on capital account is referred to in the prefatory note to this report. During the year the nett expenditure was $3,929,107 as compared with $3,796,036 in 1924.

Kelantan section. 130. On the Kelantan section, the line was opened for traffic as far as Kuala Krai (53 miles) and platelaying completed to the 68th mile. Good progress was made with earthwork as far as Kemubu (96 miles). Good progress was made on the tunnels at the 69th, 74th and 86th miles. The expenditure during the year amounted to $2,113,442.

Pahang section.

131. Work was re-opened at the beginning of 1924 and good progress has been made. Platelaying has been completed up to 182nd mile. Good progress has been made on the tunnel at the 172nd mile. The expenditure during the year amounted to $856,949.

Teluk Ayer godowns, Singapore.

132. The Teluk Ayer godowns at Singapore have not, so far, been a successful investment, but there has been an increased demand for accommodation during the year. The capital cost to the Government was $1,570,967. The cost to the Government last year was $101,670, made up of $17,600 for assessment, $80,016 for ground rent, and $4,054 for erection of partitions and maintenance. The rent received was $74,440. The total leasable area of this property is 298,496 square feet, of which 154,670 square feet were let under agreements for six months or more, whilst space averaging 13,015 square feet per month was let for shorter periods during the year. The area under rent at the end of the year was 163,670 square feet.

Minor Works.

133. Work progressed on the New Engine and Carriage Sheds and Goods Yards at Ipoh and Seremban and the Klang River Bridge. Good progress was made on the doubling of the line Batu Junction to Sungei Besi and the section Kuala Lumpur to Sungei Besi was completed and opened for traffic in January, 1925. The work on the tunnel at Kuala Lumpur was commenced in 1924 and good progress has been made.

Bukit Serayah.

134. Work on the scheme for a supply of water to Prai from Bukit Serayah was re-opened in February, 1925. Good progress was made during the year. The total expenditure on this service up to the end of the year was $203,593.

Railway Board.

135. The Railway Board held eleven meetings during the year. It has three official and six unofficial members; and of the unofficials, one resides in Singapore and another at Penang.

XV.—GENERAL.

Public Trustee.

136. The year under review was the third year of the working of the Department of Public Trustee. The duties of the Public Trustee are (*a*) to act in the administration of the estates of small value, (*b*) to act as an ordinary trustee, and (*c*) to act as a trustee appointed by the Court. During the year the Public Trustee accepted six trusts, the administration in three cases of the estate of a person deceased, and the deposit of six wills or copies of wills.

Co-operation.

137. The co-operative movement continues to make good progress. Rural credit societies have increased from 20 to 48. Perak leads with 32 societies: then comes Negri Sembilan with

ten societies and Selangor with six societies. No work has been possible in Pahang as a suitable Malay organiser has not yet been discovered for work in that State. Thrift and loan societies, consisting mostly of Government servants, but inclusive of the Kuala Lumpur mercantile employees' society and a society confined to the Jaffnese community, numbered 22 on the 31st December, 1925, as against 19 on the 31st December, 1924. The increase in membership and working capital is set out in the subjoined table.

Details.		No. of Societies.	No. of Members.	Total working capital.
				$
AGRICULTURAL.—				
Rural Credit	1924	20	725	22,267
	1925	48	2,191	73,766
NON-AGRICULTURAL.—				
Thrift and Loan Societies	1924	19	5,785	268,816
	1925	22	8,278	668,830
Grand Total 1925 ...		70	10,469	742,596

The above figures are provisional and subject to official audit. They do not include the statistics for 23 other rural credit societies, which, although organised and actually working at the end of the year, have not yet been placed on the register. The membership and working capital of these unregistered societies are estimated at 730 and 7,471, respectively. A co-operative store at Batu Gajah is still doing business on a very small scale.

Volunteering.

138. During the current year the command of the Malay States Volunteer Regiment and the Malayan Volunteer Infantry Units became vested in one Commandant. The peculiar organisation, by which the Malay States Volunteer Regiment is on a Federal basis whereas the Malayan Volunteer Infantry Units are on a State basis, is working satisfactorily. Many Volunteers who had ceased to take an active part in the training were called upon to resign or placed on the Reserve during the year. The result was a slight fall in the strength, but the increased efficiency of the Force has more than compensated for it. Enrolments are chiefly those of young men who are new arrivals in the country, and the thanks of the Government are due to the Rubber Growers' Association and the Federated Malay States Chamber of Mines and other influential bodies which have interested themselves in the Volunteer movement. The most

important part of the Malay States Volunteer Regiment training is the annual camp at Port Dickson, and it is hoped that all employers will afford their employees the opportunity to put in a week's training there. The musketry report is excellent. The Easter Rifle Meeting at Kuala Lumpur was an unqualified success: the average all through was high; the highest score at 900 yards being actually higher than any recorded at Bisley last year; and the average per firer at each range was 4⅓ points higher than last year. Lieut.-Colonel F. R. W. Graham, D.S.O., M.C., relinquished the command of the Force during the year, and rejoined his Regiment. To his energy, ability and personality, much of the improvement of the past five years is due; and on behalf of the Force I would like to express their gratitude to him.

Planters Loans Board.

139. On the 1st January, 1925, the Planters Loans Board had outstanding as "Planters Loans" to 17 companies ($905,338) and to 64 individuals ($1,481,198) the sum of $2,349,725. It lent only $63,200 (in three loans) during the year. In the course of the year, 56 properties repaid their loans in full amounting to $1,401,624, and 20 properties made partial repayments amounting to $376,389. At the end of the year, the loans outstanding were $234,638 to five companies, and $417,478 to 22 individuals. Under the "War Service Land Grants" scheme (of which the figures and accounts are not included in the statements given above), 119 ex-soldiers were benefiting by approved loans amounting to $2,867,750, of which $1,437,960 had actually been paid out. During the year, repayments were made by eight beneficiaries, and two properties were sold. At the end of the year the total aggregate amount of the approved loans amounted to $2,644,250. Interest amounted to $227,553, of which $140,780 was in respect of planters' loans, and $86,772 in respect of war service loans. Of this sum, $186,577 was paid into Federal revenue, and $95,525 to the revenue of the Board. The Board's profit of the year's working amounted to $56,713. Its general reserve fund stood at $525,000 at the end of the year, and its special reserve fund (in connection with war service loans) at $38,660. The Board operates upon a fund of $4,000,000 provided by the "Planters Loans Fund Enactment, 1915." From this fund (which can be increased by a resolution of the Federal Council) loans have been made for agricultural purposes. By an amending Enactment passed during the current year, loans can now be made for not only for agricultural purposes but also for any such other purposes as may, in the opinion of the Board, directly assist in the general development of the Federated Malay States.

Meteorology.

140. There are thirty-six hospitals where records of temperature and humidity are taken thrice daily, and rainfall twice daily. In addition, there are twelve hospitals and dispensaries where rainfall only is recorded. The instruments in use are standardised, and housed in Stevenson screens, thus ensuring uniformity of exposure. There are only four stations where observations of temperature humidity, wind, and cloud are taken three times daily. These are situated at Kuala Lumpur (Lake Gardens); Cameron's Highlands (two stations); and Fraser's Hill. Continuous records, by autographic instruments, of temperature, humidity, and rainfall are taken. Sunshine recorders are also in use at these stations. Arrangements are being made to equip a similar station on Maxwell's Hill, Taiping. The training of Dressers who carry out observations is being continued at the hospitals; special classes of instruction at the Museum, Kuala Lumpur, have also been held. No real attempt has yet been made at the various hospitals to carry out observations of wind force and direction, cloud form and movement, nor are they supplied with autographic instruments. The rainfall in 1925 was abnormally heavy. The mean of all stations shows the following percentages above the average: Perak, 24 per cent.; Selangor, 25 per cent.; Negri Sembilan, 23 per cent.; Pahang, 15 per cent. Many stations show 1925 as the highest year in their records. November was particularly wet, the rainfall being 130 per cent. above the average. The temperature of the year was slightly below the normal.

Labour.

141. Returns of labour under section 82 of "The Labour Code, 1923," from 1,208 estates showed 137,761 Madras Indians, 37,879 Chinese, 4,165 Javanese and 4,549 other nationalities. In addition, figures show 19,268 Madras Indians, 2,324 Chinese, 150 Javanese and 2,419 other nationalities employed by Government departments. The total returns from estates and Government departments combined thus show 157,029 Madras Indians, 40,203 Chinese, 4,315 Javanese and 6,968 other nationalities.

142. I have given in paragraph 122 of this report some figures relating to the expenditure of the Public Works Department upon the special services for which the London Sterling Loan had been subscribed. Figures regarding that loan are given elsewhere in this report. In 1920, out of a provision of nearly eight million dollars for public works, which were of urgent importance, the Government was able to spend little more than three millions, and in the year under review, out of a provision of nearly ten millions, it was able to spend less than $4¾ millions.

In 1920, the same department, upon similar services, had been able to spend considerably over $5½ millions. It is thus seen that, despite the present prosperity of the country, the Government has been able to spend upon urgent public works less than it had been able to do in a year when the "slump" was in view. This failure is due almost entirely to the scarcity of labour: the road contractors have few coolies: the building contractors have few carpenters and masons; and the result is that it is impossible to let contracts. I referred in my last annual report to the lessons of the "bad years" of 1921 and 1922, and I cannot refrain from doing so again. I had described the year 1923 as being one of convalescence and recuperation, and the year 1924 as one of steady and most satisfactory improvement. The lesson of the year under review is that the past years of depression have brought about a position in which the Government, in spite of renewed prosperity, nevertheless, has a large sum of money to spend upon urgent public works and is unable to spend it. After complete financial recovery there is an interval—*hiatus valde deflendus*—between having money and having the power to spend it; and this is due to the labour problem. The mining and planting industries are affected in exactly the same way. The tin miners depend upon Chinese labour: the rubber planters depend mainly upon Tamil labour, but also to a very considerable extent upon Chinese. When there is a business depression in either industry, the labour force disperses and returns to India and China. With the return of prosperity it is very slowly that the labour force comes back from distant countries and reassembles here. This is one of the elementary laws of "Supply and Demand"; and, as such, I recommend it to the earnest attention of everyone interested in the policy of "Rubber Restriction". I state the proposition that an acute depression in the price of rubber (or tin) drives the labour force out of the country; that there is a marked time interval between the recovery in the price of rubber (or tin) and the reassembling of the labour force; that during that period the producers are powerless to meet the demands of the manufacturers; that the high price of the raw article during that period carries certain monetary compensations to the producers; but that, nevertheless, it is not in the true interests of the industry as a whole. It is suggested that if the manufacturers would see the case as the producers see it, they might be more ready to combine with them in measures designed for their common interests, and for those of the ultimate consumer.

W. GEORGE MAXWELL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
6th May, 1926.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609.807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,362	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

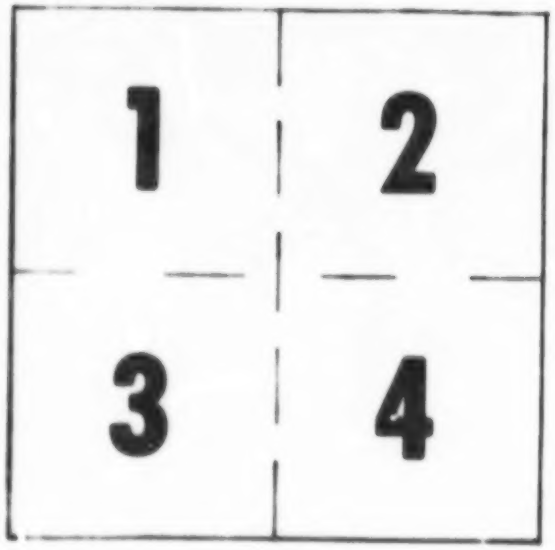
* As now corrected. ‖ Excluding bullion and specie. † The figures for previous years included items now omitted owing to reclassification of revenue.

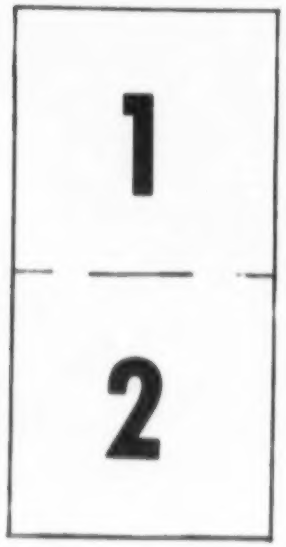
APPENDIX B.

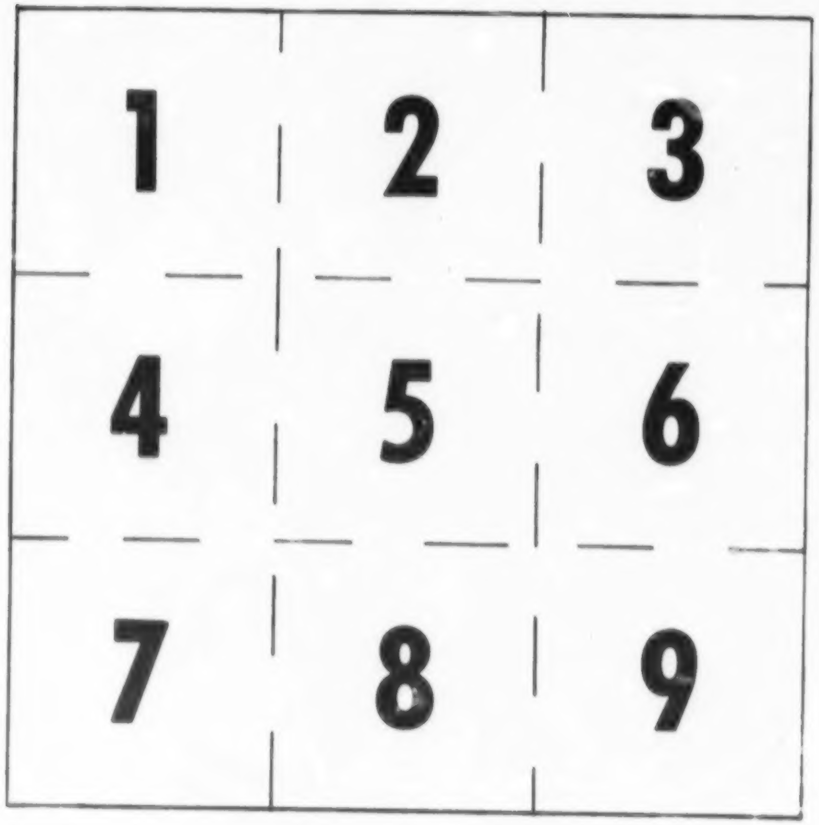
STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1925.

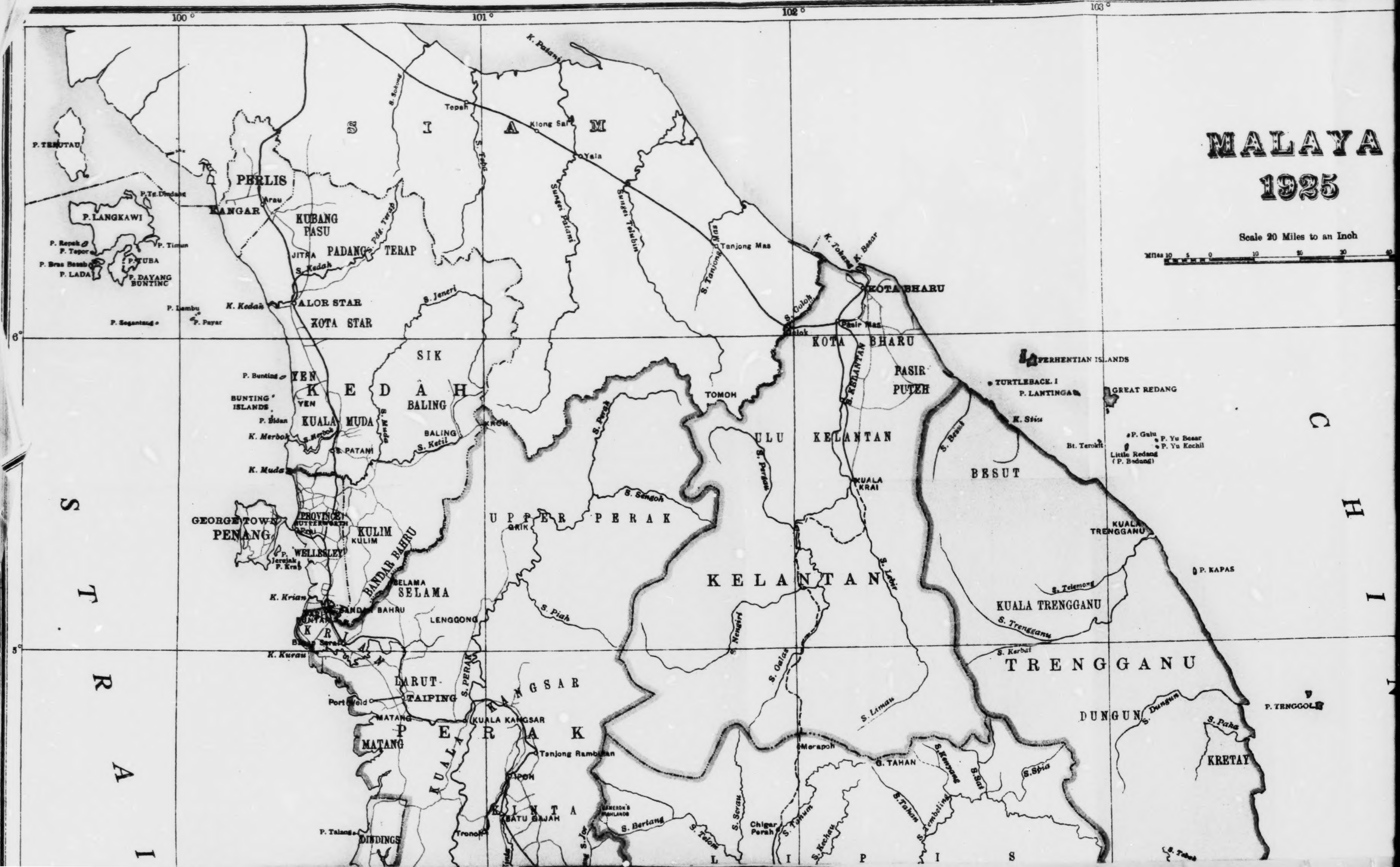
Dr.	$ c.	$ c.	$ c.	*Cr.*	$ c.
To Loan Expenses—				**By Loan Subscriptions—**	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921 ...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ..	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamps, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department		12,430,183 84			
Posts and Telegraphs Department		965,664 40			
Topographical Survey Department		495,908 76			
Topographical Survey of Forest Reserves ...		42,622 50			
Railway—Open Lines		1,382,051 13			
„ Construction		25,719,096 79	41,035,527 50		
			46,923,692 19		
To Balance ...	...	...	33,262,022 10		
			$80,185,714 29		$80,185,714 29

Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.





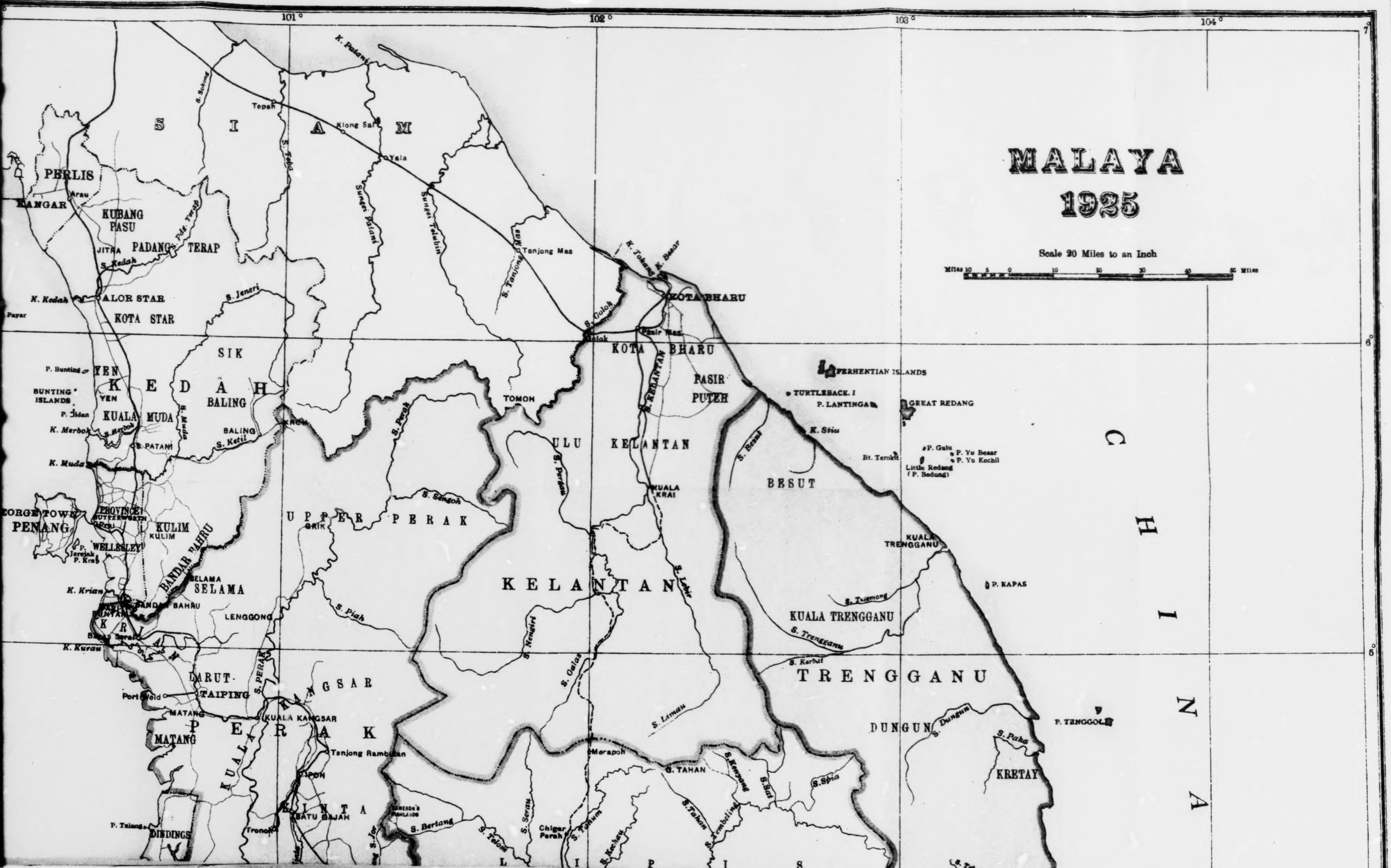




MALAYA
1925

Scale 20 Miles to an Inch

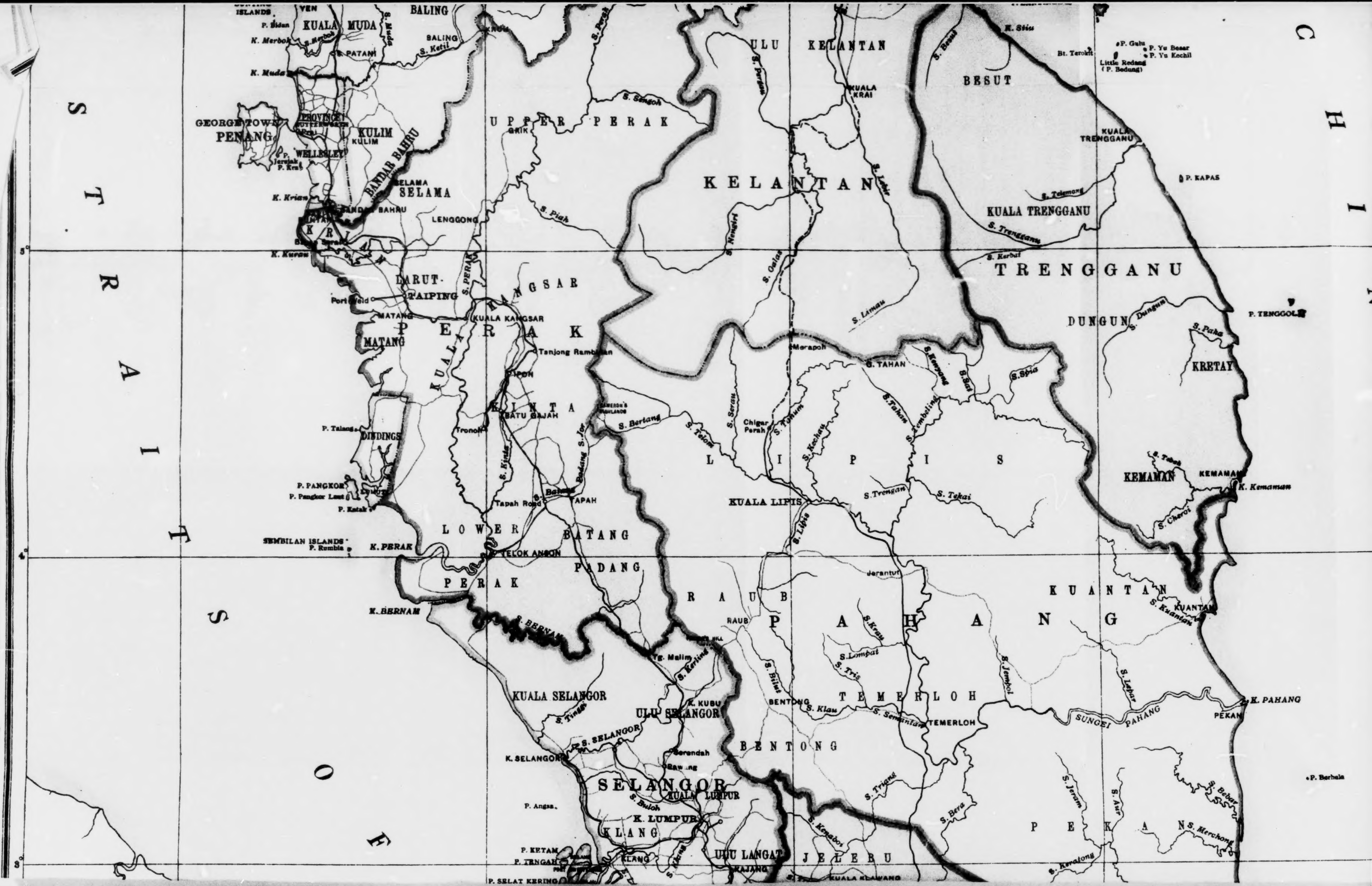
100°
101°
102°
103°
6°
5°
Miles 10 5 0 10 20 30 40
S I A M
PERLIS
KANGAR
Arau
KUBANG PASU
PADANG TERAP
JITRA
S. Kedah
ALOR STAR
KOTA STAR
K. Kedah
P. TERUTAU
P. Tg. Dindang
P. LANGKAWI
P. Timun
P. Repeh
P. Tepor
P. Bras Basah
P. LADA
P. TUBA
P. DAYANG BUNTING
P. Lembu
P. Segantang
P. Payar
Tepah
Klong Sai
Yala
K. Patani
S. Sobong
S. Tebi
Sungei Patani
Sungei Telubin
S. Tanjong Mas
Tanjong Mas
K. Tabang
K. Besar
S. Golok
KOTA BHARU
Pasir Mas
KOTA BHARU
PASIR PUTEH
S. KELANTAN
TOMOH
ULU KELANTAN
S. Pergau
KUALA KRAI
S. Lebir
KELANTAN
S. Nenggiri
S. Galas
S. Limau
Merapoh
G. TAHAN
S. Jeneri
SIK
KEDAH
YEN
P. Bunting
BUNTING ISLANDS
P. Bidan
KUALA MUDA
K. Merbok
S. Merbok
S. Muda
BALING
S. Ketil
KROH
PATANI
K. Muda
S. Perak
S. Sengoh
UPPER PERAK
GRIK
GEORGE TOWN
PENANG
PROVINCE WELLESLEY
BUTTERWORTH
P. Jerejak
P. Krah
KULIM
BANDAR BAHRU
SELAMA
K. Krian
BANDAR BAHRU
PARIT BUNTAR
KRIAN
Bagan Serai
K. Kurau
LENGGONG
S. Piah
LARUT
TAIPING
S. PERAK
Port Weld
MATANG
MATANG
KUALA KANGSAR
KUALA KANGSAR
PERAK
Tanjong Rambutan
IPOH
KINTA
BATU GAJAH
Tronoh
P. Talang
DINDINGS
CAMERON'S HIGHLANDS
S. Bertang
S. Jor
S. Telom
S. Serau
Chigar Perah
S. Tahum
S. Kechau
S. Tahan
S. Tembeling
S. Kenyong
S. Sat
S. Spia
PAHANG
PERHENTIAN ISLANDS
TURTLEBACK. I
P. LANTINGA
GREAT REDANG
K. Stiu
S. Besut
BESUT
P. Gulu
P. Yu Besar
P. Yu Kechil
Bt. Terokit
Little Redang (P. Redang)
KUALA TRENGGANU
P. KAPAS
S. Telemong
KUALA TRENGGANU
S. Trengganu
S. Karbut
TRENGGANU
DUNGUN
S. Dungun
S. Paka
KRETAY
P. TENGGOL
S. Tebak
STRAIT
CHIN



MALAYA
1925

Scale 20 Miles to an Inch

101°
102°
103°
104°
7°
6°
5°
Miles 10 5 0 10 20 30 40 50 Miles
S I A M
K. Patani
S. Sokong
Tepah
Klong Sai
Yala
Sungei Patani
Sungei Telubin
S. Tanjong Mas
Tanjong Mas
K. Tokang
K. Besar
PERLIS
KANGAR
Arau
KUBANG PASU
JITRA
PADANG TERAP
S. Kedah
K. Kedah
ALOR STAR
KOTA STAR
S. Jeneri
Payar
SIK
P. Bunting
BUNTING ISLANDS
YEN
K E D A H
P. Jidan
K. Merbok
KUALA MUDA
S. Muda
BALING
S. Ketil
S. PATANI
K. Muda
KROH
GEORGE TOWN
PENANG
PROVINCE
BUTTERWORTH
WELLESLEY
P. Jerejak
P. Kra
KULIM
BANDAR BAHRU
SELAMA
K. Krian
BANDAR BAHRU
LENGGONG
K. Kurau
K R I A N
LARUT
TAIPING
Port Weld
MATANG
KUALA KANGSAR
P E R A K
Tanjong Rambutan
IPOH
K I N T A
BATU GAJAH
Tronoh
P. Talang
DINDINGS
KUALA KANGSAR
S. PERAK
UPPER PERAK
GRIK
S. Perak
S. Sengoh
S. Piah
CAMERON'S HIGHLANDS
S. Bertang
S. Telom
S. Serau
Chigar Perah
S. Tahum
S. Kechau
S. Golok
Golok
KOTA BHARU
Pasir Mas
KOTA BHARU
S. KELANTAN
PASIR PUTEH
TOMOH
ULU KELANTAN
S. Pergau
KUALA KRAI
KELANTAN
S. Nenggiri
S. Galas
S. Lebir
S. Lemau
Merapoh
G. TAHAN
S. Tahan
S. Tembeling
S. Kenyong
S. Sat
S. Spia
PERHENTIAN ISLANDS
TURTLEBACK. I
P. LANTINGA
GREAT REDANG
K. Setiu
Bt. Terokit
P. Galu
P. Yu Besar
P. Yu Kechil
Little Redang (P. Bedung)
S. Besut
BESUT
KUALA TRENGGANU
S. Telemong
KUALA TRENGGANU
S. Trengganu
P. KAPAS
S. Kerbat
TRENGGANU
DUNGUN
S. Dungun
P. TENGGOL
S. Paka
KRETAY
C H I N A
L I P I S



S T R A I T S O F
C H I N
ISLANDS
P. Sidan
K. Merbok
KUALA MUDA
S. Muda
BALING
S. Ketil
S. PATANI
K. Muda
GEORGE TOWN
PENANG
PROVINCE WELLESLEY
KULIM
BANDAR BAHRU
SELAMA
K. Krian
KRIAN
K. Kurau
LENGGONG
UPPER PERAK
GRIK
S. Perak
S. Piah
S. Sengoh
ULU KELANTAN
S. Pergau
KUALA KRAI
KELANTAN
S. Lebir
S. Nenggiri
S. Galas
S. Limau
BESUT
S. Besut
K. Stiu
Bt. Terokit
P. Gulu
P. Yu Besar
P. Yu Kechil
Little Redang (P. Bedang)
KUALA TRENGGANU
S. Telemong
S. Trengganu
S. Kerbat
P. KAPAS
TRENGGANU
DUNGUN
S. Dungun
S. Paka
KRETAY
P. TENGGOL
LARUT-TAIPING
Port Weld
MATANG
KUALA KANGSAR
PERAK
Tanjong Rambutan
IPOH
KINTA
BATU GAJAH
Tronoh
CAMERON'S HIGHLANDS
S. Bertang
S. Telom
S. Serau
Chigar Perah
S. Tembeling
S. Tahan
S. Sat
S. Spia
G. TAHAN
Merapoh
LIPIS
KUALA LIPIS
S. Lipis
S. Trengan
S. Tekai
S. Kechau
KEMAMAN
S. Tebak
S. Cheroi
K. Kemaman
P. Talang
DINDINGS
P. PANGKOR
P. Pangkor Laut
LUMUT
P. Katak
SEMBILAN ISLANDS
P. Rumbia
S. Kinta
S. Batang
Tapah Road
TAPAH
LOWER PERAK
BATANG PADANG
K. PERAK
TELOK ANSON
PERAK
K. BERNAM
S. BERNAM
Tg. Malim
S. Kerling
RAUB
Jerantut
PAHANG
KUANTAN
S. Kuantan
S. Krau
S. Lompat
S. Tria
S. Bilut
S. Jempol
S. Lepar
BENTONG
TEMERLOH
S. Klau
S. Semantan
SUNGEI PAHANG
K. PAHANG
PEKAN
KUALA SELANGOR
S. Tinggi
ULU SELANGOR
K. KUBU
S. SELANGOR
K. SELANGOR
Serendah
Rawang
SELANGOR
KUALA LUMPUR
S. Buloh
K. LUMPUR
KLANG
P. Angsa
P. KETAM
P. TENGAH
PORT SWETTENHAM
P. SELAT KERING
ULU LANGAT
KAJANG
JELEBU
KUALA KLAWANG
S. Triang
S. Kenaboi
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S. Aur
S. Bebar
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S. Keratong
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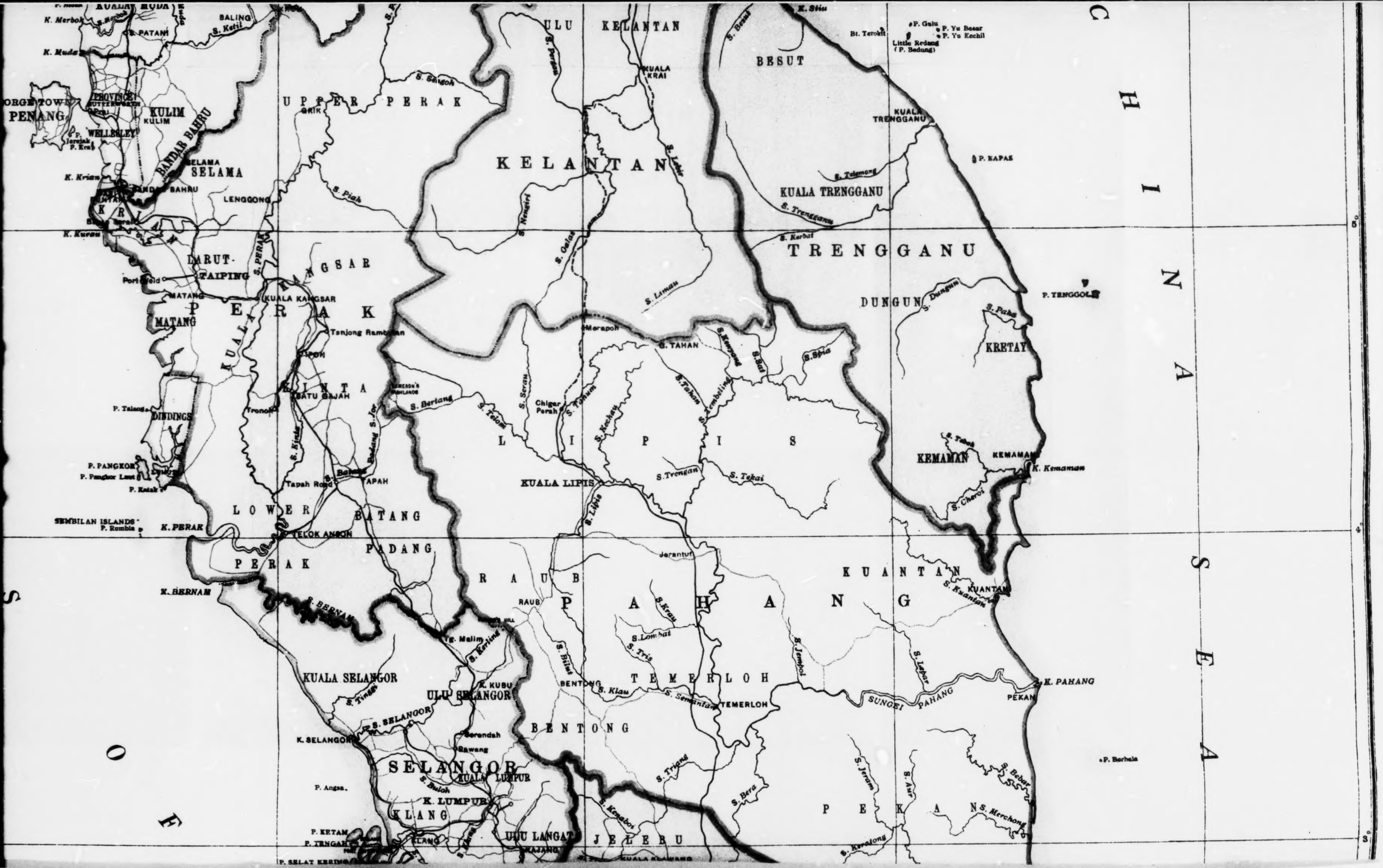
3°
4°



KUALA MUDA
K. Merbok
S. Merbok
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S. Ketil
S. PATANI
K. Muda
GEORGETOWN
PENANG
PROVINCE WELLESLEY
BUTTERWORTH
Prai
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BATU GAJAH
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S. Joe
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S. BERNAM
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S. Trengan
S. Tekai
Jerantut
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FRASER'S HILL
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S. Cherol
K. Kemaman
P. Berhala
CHINA SEA
S OF
5°
4°
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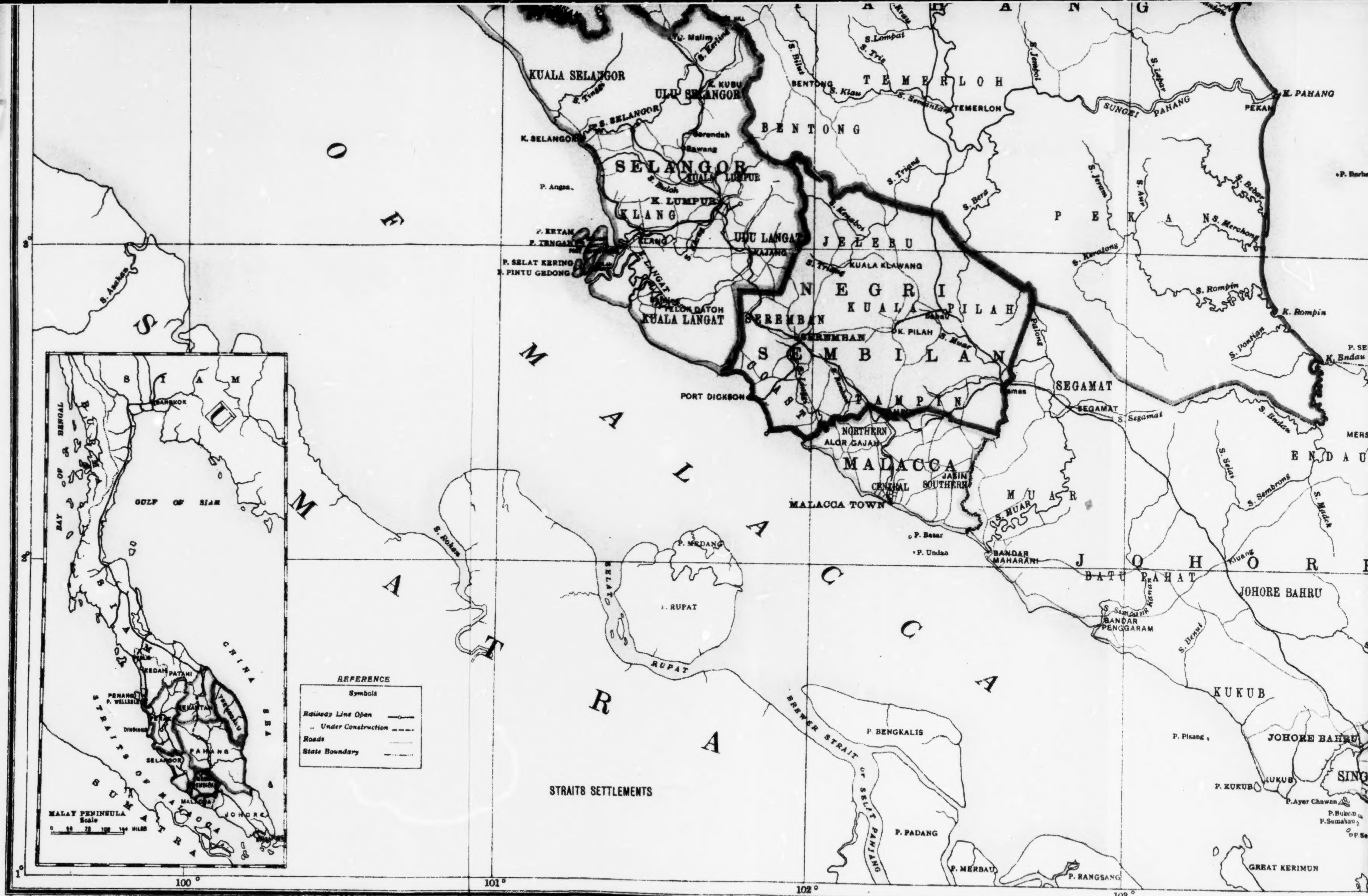
STRAITS SETTLEMENTS
REFERENCE
Symbols
Railway Line Open
" Under Construction
Roads
State Boundary
MALAY PENINSULA
Scale
0 36 72 108 144 MILES
SIAM
BANGKOK
GULF OF SIAM
BAY OF BENGAL
CHINA SEA
STRAITS OF MALACCA
SUMATRA
KEDAH
PATANI
PENANG
P. WELLESLEY
PERAK
KELANTAN
TRENGGANU
DINDINGS
PAHANG
SELANGOR
MALACCA
JOHORE
STRAITS OF MALACCA
SUMATRA
PAHANG
KUALA SELANGOR
S. Tinggi
S. SELANGOR
K. SELANGOR
ULU SELANGOR
Tg. Malim
S. Kerling
K. KUBU
Serendah
Rawang
SELANGOR
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S. Buloh
K. LUMPUR
KLANG
P. Angsa
P. KETAM
P. TENGAH
P. SELAT KERING
P. PINTU GEDONG
S. LANGAT
ULU LANGAT
KAJANG
TELOK DATOH
KUALA LANGAT
BENTONG
TEMERLOH
S. Bilut
BENTONG
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TEMERLOH
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S. Triang
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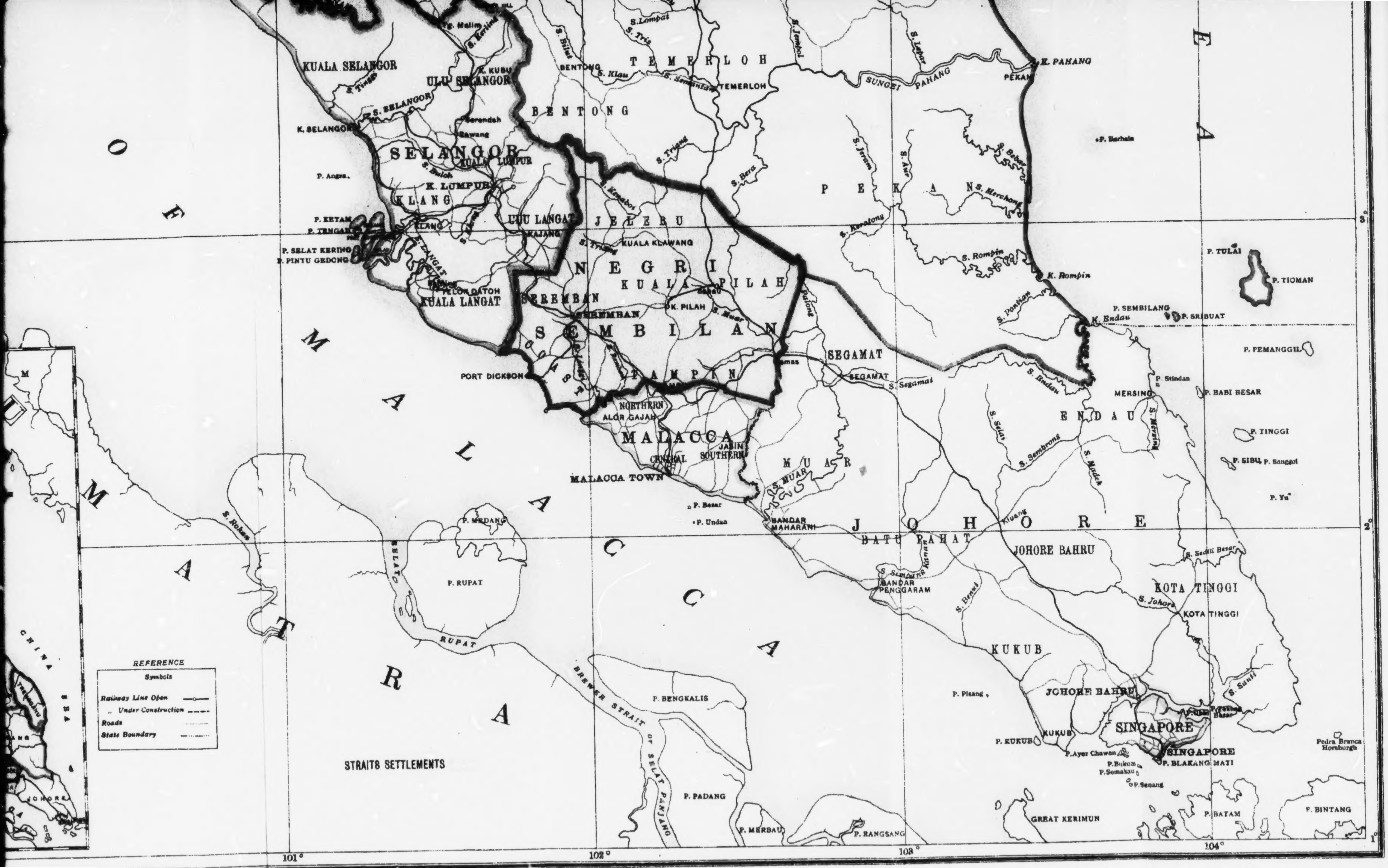
S. Jempol
S. Lebar
SUNGEI PAHANG
PEKAN
K. PAHANG
PEKAN
S. Jeram
S. Aur
S. Bebar
S. Merchong
S. Kenaboi
JELEBU
S. Triang
KUALA KLAWANG
NEGRI SEMBILAN
KUALA PILAH
K. PILAH
Bahau
S. Muar
SEREMBAN
SEREMBAN
COAST
PORT DICKSON
S. Linggi
TAMPIN
S. Palong
S. Keratong
S. Rompin
K. Rompin
S. Pontian
K. Endau
SEGAMAT
SEGAMAT
S. Segamat
S. Endau
ENDAU
NORTHERN
ALOR GAJAH
MALACCA
JASIN
SOUTHERN
CENTRAL
MALACCA TOWN
MUAR
S. MUAR
P. Besar
P. Undan
BANDAR MAHARANI
JOHORE
BATU PAHAT
Kluang
JOHORE BAHRU
S. Selai
S. Sembrong
S. Madek
S. Simpang Kanan
BANDAR PENGGARAM
S. Benut
KUKUB
P. Pisang
JOHORE BAHRU
P. KUKUB
KUKUB
P. Ayer Chawan
P. Bukum
P. Semakau
SING
GREAT KERIMUN
S. Asahan
S. Rokan
SUMATRA
STRAIT OF MALACCA
P. MEDANG
SELAT
P. RUPAT
RUPAT
BREWER STRAIT
P. BENGKALIS
SELAT PANJANG
P. PADANG
P. MERBAU
P. RANGSANG
100°
101°
102°
103°
1°
2°
3°



O F
M A L A C C A
S T R A I T S
S U M A T R A
S E A
KUALA SELANGOR
ULU SELANGOR
S. Selangor
K. SELANGOR
SELANGOR
KUALA LUMPUR
K. LUMPUR
KLANG
ULU LANGAT
KAJANG
KUALA LANGAT
P. Angsa
P. KETAM
P. TENGAH
P. SELAT KERING
P. PINTU GEDONG
S. Langat
Sepang
PELOK DATOH
T E M E R L O H
TEMERLOH
B E N T O N G
BENTONG
S. Lompat
S. Bilut
S. Klau
S. Semantan
S. Triang
S. Bera
S. Jempol
S. Lebar
SUNGEI PAHANG
K. PAHANG
PEKAN
P E K A N
S. Jeram
S. Aur
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S. Merchong
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S. Rompin
K. Rompin
P. Berhala
J E L E B U
KUALA KLAWANG
S. Kenaboi
S. Triang
N E G R I
S E M B I L A N
KUALA PILAH
K. PILAH
SEREMBAN
S. Muar
PORT DICKSON
COAST
T A M P I N
Gemas
S. Palong
S. Linggi
NORTHERN
ALOR GAJAH
MALACCA
CENTRAL
JASIN
SOUTHERN
MALACCA TOWN
P. Besar
P. Undan
SEGAMAT
S. Segamat
S. Pontian
K. Endau
S. Endau
E N D A U
MERSING
S. Mersing
S. Sembrong
S. Selai
S. Madek
M U A R
S. MUAR
BANDAR MAHARANI
J O H O R E
BATU PAHAT
Kluang
S. Simpang Kanan
BANDAR PENGGARAM
S. Benut
JOHORE BAHRU
KOTA TINGGI
S. Johore
S. Sedili Besar
S. Santi
KUKUB
P. Pisang
P. KUKUB
JOHORE BAHRU
SINGAPORE
P. Ubin
P. Tekong Besar
P. Ayer Chawan
P. Bukum
P. Semakau
P. Senang
P. BLAKANG MATI
Pedra Branca Horsburgh
P. TULAI
P. TIOMAN
P. SEMBILANG
P. SRIBUAT
P. PEMANGGIL
P. Stindan
P. BABI BESAR
P. TINGGI
P. SIBU
P. Sanggol
P. Yu
S. Rokan
P. MEDANG
P. RUPAT
SELAT RUPAT
BREWER STRAIT
OF SELAT PANJANG
P. BENGKALIS
P. PADANG
P. MERBAU
P. RANGSANG
GREAT KERIMUN
P. BATAM
P. BINTANG
STRAITS SETTLEMENTS
CHINA SEA
JOHORE
REFERENCE
Symbols
Railway Line Open
" Under Construction
Roads
State Boundary
101°
102°
103°
104°
3°
2°
1°

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No. 1344.

FEDERATED MALAY STATES.

REPORT FOR 1926.

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(454)

FEDERATED MALAY STATES.

ANNUAL REPORT

FOR

1926

BY

WILLIAM PEEL, C.M.G.,
Chief Secretary to Government, Federated Malay States.

KUALA LUMPUR:
PRINTED AT THE FEDERATED MALAY STATES GOVERNMENT PRINTING OFFICE.

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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1926.

[*The value of the dollar is* 2*s.* 4*d.*]
[*A pikul is* 133⅓ *pounds av.*]

PREFATORY NOTE.

I.—HISTORICAL.

1. The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

2. British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

3. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Idris.

SELANGOR.

4. In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

5. In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

6. This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of

the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

7. In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

8. Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts

with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

9. In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

10. The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

11. In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire

for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President, Their Highnesses the Sultans of Perak, Selangor and Pahang, His Highness the Yam Tuan of Negri Sembilan, the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, and eight unofficial members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval. (The Federal Council has since been reconstituted, a new Agreement being signed on April 24th, 1927.)

II.—GEOGRAPHICAL.

12. Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

13. Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

14. Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

15. Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

III.—CLIMATE.

16. The temperature of the West Coast of the Malay Peninsula has but small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from typical stations on the West of the Peninsula, where the South-West Monsoon is broken by Sumatra, show a decrease of rainfall from May to August. At Kuala Lipis on the east of the main range, there is a general rise in rainfall from February until May, succeeded in some years by a distinct drop in July and August; there is a further rise culminating in October and November, followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In the mountains the rainfall is high, particularly in the Larut Hills above Taiping where the average at "The Cottage" (Maxwell's Hill), 4,513 feet, for the years 1904-1926 was 253 inches. This station however is very exceptional, as the mean for other hill stations of approximately the same altitude is: Fraser's Hill (4,125 feet) 119 inches, Cameron's Highlands (4,750 feet) 120 inches. The district of Jelebu, which is shielded from the influence of both North-East and South-West Monsoons is by far the driest and has an average rainfall in the years 1891-1925 of 64 inches.

On the West Coast of the Peninsula the coastal stations are the driest, the average rainfall being about 84 inches. This gradually increases landwards, and the stations close to the foot of the main range of mountains show an average fall of about 115 inches. The opposite is true of the eastern side of the Peninsula where the coast stations show a mean of about 122 inches, due entirely to the heavy falls experienced during North-East Monsoon; and the inland stations showing a mean of about 94 inches.

Negri Sembilan, owing to the absence of high mountains, has the lowest rainfall of the States of the Federation, the average of seven stations being only 80 inches.

The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100° has never been recorded in the shade. The nights are cool. On the highest mountains, the temperature has been known to fall at nights to 46° Fahrenheit. In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only real strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally, they are of short duration and occur during the night.

IV.—STATISTICS.

17. The return, which forms the appendix to this report, shows for every year from 1889 onwards particulars of revenue, expenditure, imports, exports, duty on tin, duty on rubber, land revenue, railway receipts and population.

V.—POPULATION.

18. The census taken on the 24th April, 1921, shows that the population of the Federated Malay States was then 1,324,890, having increased since 1911 by 27.7 per cent. Of this population 853,528 are males and 471,362 females, the rate of increase since 1911 having been 17.7 and 51.1 respectively.

The Malay population rose from 420,840 in 1911 to 510,821 in 1921, an increase of 21.3 per cent. The rates of increase of the Malay population were 20.1 per cent. in Perak, 41.3 per cent. in Selangor, 11.3 per cent. in Negri Sembilan, and 17.3 per cent. in Pahang. The very high rate of increase in Selangor, where, in the Kuala Selangor district, the Malay population practically doubled since 1911, is due to the influx of foreign Malays, who have settled in the Coast districts to plant rubber.

The Chinese population of the Federated Malay States was 494,548 or only 61,304 more than in 1911. Practically the whole of this increase was in Chinese females, who now number 351 to 1,000 males as compared with 188 in 1911, and the lessening disparity between the sexes among the Chinese indicates a general tendency towards their permanent settlement in the Federated Malay States.

The rise in the Indian population was a marked feature of the 1921 census. In 1901, 58,386 persons of Indian nationality were enumerated; ten years later the number had risen to 172,465, the increase synchronising with the early development of the rubber planting industry, while in 1921 Indians in the Federated Malay States totalled 305,219. The percentages of increase since 1911 were 77.2 in Perak, 78.9 in Selangor, 84.4 in Negri Sembilan, and 81.4 in Pahang. More than four-fifths of the Indians in the Federated Malay States are Tamils.

The European population of the Federated Malay States rose from 3,284 in 1911 to 5,686 in 1921, of whom 93.2 per cent. are of British nationality. The most satisfactory feature of the census is that all the statistics, of sex, of marriage, of age and of birth place, show that the immigrant races, who have done so much to develop the resources of the Federated Malay States, are ceasing to look upon these States as a place of temporary sojourn and are tending more and more to make their permanent home here.

VI.—RAILWAYS.

19. The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines; the West Coast line runs North-North-West through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour—about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

20. The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, Kelantan. It is completed and opened for traffic as far as Chigar Perah Station, 23 miles beyond Kuala Lipis, the capital of Pahang, and 164 miles from Gemas. At the end of 1926, the permanent way had been laid to beyond the Kelantan frontier. A section of 53 miles in Kelantan between Tumpat on the East Coast and Krai, is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Krai towards Pahang. The distance

between railheads in Kelantan is 60 miles. Railhead at the end of 1926 was at the 70th mile, and earthwork, etc., was in progress up to the Pahang boundary. An extension—13 miles long—has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on November 1st, 1921.

21. Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang, work as contemplated on the wharves has been carried out. A causeway to carry two lines of rails and a roadway has been built across the Johore Strait connecting the Island of Singapore with the mainland.

22. The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,005 miles. The line is of metre gauge. On the mail trains on the West Coast main line, there are sleeping saloons and restaurant cars. There are 247 permanent stations and 31 flag stations. The expenditure on capital account (including lines not yet open for traffic) was $205,141,595 up to 31st December, 1926, of which $172,303,292 was met from revenue, and $32,838,303 from loan account.

VII.—HILL STATIONS.

CAMERON'S HIGHLANDS.

23. The development of Cameron's Highlands as a hill station has been definitely decided on by Government.

A Development Committee consisting of six officials and two unofficials was appointed on 28th May, 1926, under the chairmanship of the Director of Public Works.

The Committee met twice during the year and submitted several recommendations to Government. It has been decided that the Highlands should be developed on the lines of a temporary holiday resort, like Fraser's Hill, and the siting of a permanent township of Federal capital is not contemplated. The main object of development is the creation of a healthy hill station rather than the extension of agriculture, but as it is hoped to supply food-stuffs that will be of benefit to people who cannot use the station itself, the reservation of areas suitable for agricultural development will be considered. It is by no means certain that there will be a large area available for agricultural purposes at the Highlands. The area above Robinson Falls may prove to be none too large even for residential purposes and the valleys of the Habu and Ringlet, hitherto looked upon as agricultural areas, may be required as an extension to the residential area.

FRASER'S HILL.

24. The road from the Gap was commenced in the year 1920 and finished in 1922. The Government has, at present, nine bungalows which are intended for the use of Government employees but which may be occupied by other than Government employees if there is a vacancy.

Another Government bungalow is now under construction and a house for the Chief Secretary to Government is to be commenced soon.

From Red Cross funds four houses have been completed and are in occupation; two are, primarily, for the use of ex-service men and women and in the others, applications supported by medical certificates receive priority.

Three private houses have been completed, and work is in hand on six other sites involving the construction of nine additional bungalows. Thirteen sites were allotted to applicants during the year.

The water supply is almost completed and a sewage disposal system will be taken in hand soon.

The golf course will be opened in 1927.

GUNONG ANGSI.

25. This is a small hill station containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

GUNONG TAHAN.

26. The establishment of a hill station at Gunong Tahan was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be

constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The rainiest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76°F. on three occasions, and the lowest minimum temperature 48°F. There appears to be no record of investigations into the area available for the residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

KLEDANG.

27. This hill is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

28. Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

ANNUAL REPORT, 1926.

I.—FINANCIAL.

Budget for 1926.

1. The estimates of revenue and expenditure for the year 1926 provided for a revenue of $84,527,002, and an expenditure (excluding Railway capital expenditure and other expenditure on public works provided for, out of loan moneys) of $70,903,381.

Actual revenue and expenditure.

2. The actual revenue for the year was $102,541,400 and the expenditure $87,663,747. Thus the surplus was $14,877,653 against an estimated surplus of $13,623,621. The principal excesses of revenue as compared with the estimate were $5,225,880 under Customs, $2,371,206 under Excise, $1,087,082 under Licences, $1,030,576 under Fees of Court, etc., $1,443,758 under Interest, $1,341,742 under Land Sales, $806,793 under Sale of Property and $3,140,545 under Railways. The largest savings in expenditure were: Railways (expenditure on revenue account), $1,670,861; Medical, $394,306; Public Works Department, $373,844; Education, $388,221; Posts and Telegraphs, $207,311; and Surveys, $230,052.

The excess over estimated expenditure was $22,007,288, the largest items being Pensions $496,458, Military $476,644, and Miscellaneous Services $20,886,716. The excess under the head of Miscellaneous Services included $17,142,857 (£2,000,000) contribution to the Singapore Naval Base and a sum of $3,548,571 written off in respect of loan and interest due by the Kelantan Government. The contribution of £2,000,000 to the Naval Base is payable over a period of five years, but the whole sum has been set aside out of revenue as a special fund.

Public debt.

3. The public debt which stood at $95,185,714, on 31st December, 1925, has been reduced to $80,185,714 on 31st December, 1926, the Straits Settlements 7 per cent. Loan of $15,000,000 having been repaid on 1st May, 1926, and now consists of the Straits Settlements Sterling Loan of (£9,355,000) $80,185,714. The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) was issued in May, 1922, at 95, bearing interest at 4½ per cent. After deducting the expenses of issue, the proceeds of these two instalments amounted to $74,297,549. Of this sum, $55,646,656 has been spent upon Railway and other works, leaving unexpended balance on the 31st December, 1926, of $18,650,893. The Sinking Funds, contributions to which commenced in 1925, amounted to $4,098,238.

The Loan to Siam.

4. The Loan to the Siamese Government (£4,630,000) $39,685,714, which is repayable by 26 annual instalments commencing on the 1st January, 1924, has been reduced to $36,890,001, on 31st December, 1926, by the payment of the third instalment due on 1st January, 1926. As this loan is being repaid by equal yearly payments to include principal and interest, the principal part of the instalments will steadily increase.

5. The following statement shows the assets and liabilities on the 31st December, 1926:

Assets and liabilities.

		$ c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		18,650,893 14
Sundry Outstanding Accounts		1,430,769 83
Straits Settlements Government War Service Land Grant Scheme		5,474 22
Due to India		351,698 78
Ceylon Agency Account ...		94,856 51
Family Remittances		4,429 74
Deposits—		
Courts	$145,993.82	
Forests	283,813.41	
Lands	940,398.68	
Postal	235,728.18	
Miscellaneous ...	1,235,947.41	
		2,841,881 50
Sundry Funds—		
Bailey Fund ...	$ 938.25	
Police Fine and Reward Fund	26,619.40	
Public Officers' Guarantee Fund	236,638.57	
Red Cross Fund...	4,635.36	
Victoria Institution Building Fund	91,740.24	
Composition Stamp Duty Fund, 4½ per cent. Loan ...	290,749.50	
Miscellaneous ...	54,159.13	
		705,480 45
War Savings Certificates, 1924-1927...		10,904 34
Singapore Naval Base Contribution Account		17,142,857 14
Opium Revenue—Replacement Reserve Fund		12,637,272 53
Inter-Treasury Accounts ...		255 20
Suspense		59,194 97
Capital Fund—Bagan Serai Rice Mill		382,429 73
Capital Fund—Kuala Kurau Rice Mill		250,000 00
Capital Fund—F. M. S. Government Factory		400,000 00
Surplus—		
Reserved for Railway Capital Expenditure and Major Public Works	$35,129,741.43	
Balance unallocated	48,958,358.86	
		84,088,100 29
		139,056,498 37

			$ c.
Cash in Treasuries and Banks as per distribution statement			8,308,368 48
Cash with Agencies—			
Crown Agents		$ 77,031.50	
F.M.S. & S.S. Joint a/c., India ..		34,455.12	
Malay States Information Agency		10,430.23	
Penang Agency		53,360.87	
Singapore Agency		431,479.19	
			606,756 91
Cash in Transit			725,645 32
Fixed Deposits			14,500,000 00
Advances at call and other temporary investments by Crown Agents			27,248,571 40
Investments (Surplus Funds)—			
S.S. Municipal Debentures (at cost)		$ 7,200.00	
Sterling Securities	$ 8,891,968.77		
Perak River Hydro-Electric Power Co. Ltd.	2,081,034.82		
	10,973,003.59		
Less Redemption Reserve	16,339.82		
		10,956,663.77	
			10,963,863 77
Investments—Singapore Naval Base Contribution Account			17,142,857 14
Investments—Opium Revenue—Replacement Reserve Fund			11,826,656 27
Investments (Specific Funds) (at cost)—			
Bailey Fund		$ 938.25	
Police Fine and Reward Fund ...		21,226.75	
Public Officers' Guarantee Fund		208,374.77	
V. I. Building Fund		90,840.24	
Security Deposits Account ...		51,718.00	
W. & O. Contribution Account ...		5,895.00	
Fire Insurance Fund—Railway ...		15,000.00	
Composition Stamp Duty Fund, 4½ per cent. Loan with Crown Agents		290,749.50	
			684,742 51
Investments—War Savings Certificates (at cost)			7,584 34
Family Remittances			1,357 14
Due by other Governments—			
Ceylon		$ 543.41	
India		4,226.08	
Johore		6,905.30	
Kedah		6,763.33	
Kelantan		4,869.71	
Sarawak		780.32	
Singapore		11,219.50	
Trengganu		9,770.39	
			45,078 04
Sundry Outstanding Accounts			801,612 20
Loans—			
Siamese Government (*b*) ...		$36,890,001.12	
Brunei Government		410,500.00	
Perlis Government		150,000.00	
Planters		407,950.59	
War Service Land Grant Scheme		1,939,885.03	
Miscellaneous...		1,326,032.40	
			41,124,369 14
Advances			372,269 82
Imprests			122,041 76
Bentong Tailings Retention Scheme			54,481 80
Stores and Materials Account, Railways			1,981,225 86
,, ,, ,, Post Office ...			982,708 26
,, ,, ,, P.W.D.			73,897 53
,, ,, ,, Marine Slipway...			35,077 31
Marine Slipway Account			15,232 75
Museums, Natural Products Account			1,000 00
Furniture making Account, Forest Department			4,627 46
Timber Account—Forest Department			31,755 78
Rottan Account—Forest Department			1,970 15
Sundry Assets			41,312 69
Suspense			319,004 81
Bagan Serai Rice Mill			382,429 73
Kuala Kurau Rice Mill			250,000 00
F.M.S. Government Factory			400,000 00
			139,056,498 37

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

Loans to Unfederated States and Brunei.

6. The total loans to Unfederated States and to Brunei, which amounted to $4,298,929 on 31st December, 1925, had been reduced to $560,500 on 31st December, 1926, and are made up as follows: Perlis, $150,000; and Brunei, $410,500. Kelantan loans amounting to $3,684,929 were settled during the year by the repayment of $136,358, the balance having been written off (*vide* para. 2).

Surplus.

7. The surplus on 31st December, 1925, was $69,210,448. As the revenue for the year exceeded the expenditure by $14,877,653, the surplus was increased to $84,088,101 on 31st December, 1926, of which a sum of $34,896,963 has been reserved for Railway capital expenditure and major public works, leaving a balance of $49,191,138 unallocated on 31st December, 1926. The statement in para. 5 shows that the surplus of $84,088,101 is not represented by cash, but shows that advances at call and other temporary investments with the Crown Agents together with investments of surplus funds have risen to $60,272,171 from $47,564,968 on the corresponding date in the preceding year.

Sterling loan capital account.

8. A statement of the sterling loan capital account is published as appendix B to this report. The sum of $80,185,714 (representing £9,000,000) has been raised, and the available balance which had been $33,262,022 on the 31st December, 1925, was reduced to $18,650,893 on the 31st December, 1926, by the expenditure during the year on loan account.

II.—TRADE, CUSTOMS AND SHIPPING.

Companies.

9. During the year, 56 local companies with a total nominal capital of $35,764,500 were incorporated and registered as compared with 38 companies ($19,285,166) in 1925, 25 companies ($12,324,763) in 1924, and 22 companies ($12,367,784) in 1923.

The largest number of companies registered in recent years was 54 companies ($38,934,928) in 1920.

The main objects of the new local companies were rubber-planting (20), mining (18) and general trading (6).

One company was formed for each of the following purposes, mining and rubber planting, coconut planting, oil palm extraction, cinema, hospital, house building, banking, manufacturing rubber products, dress making, dealing in ironware and hardware, broking, and newspaper publication.

The number of companies in liquidation in 1926 was 16: and during the year four local companies were struck off the register as defunct.

There were 296 companies on the register at the end of the year.

Trade.

10. The aggregate value of trade for the year 1926 was $619,487,927, shewing an increase of $70,493,310 or over 12.8 per cent. as compared with the previous record of the year 1925. This satisfactory position is due largely to increased rubber exports and the higher prices ruling for tin. The distribution per head of the population was nearly £52 as compared with approximately £46 in the year 1925.

Erratum Slip.

ANNUAL REPORT OF THE CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1926.

Page 14, paragraph 7, line 4, *for* "$34,896,963" *read* "$35,129,741" and line 6, *for* "$49,191,138" *read* "$48,958,359".

1926	173,887,724	445,600,203	271,712,479

Distribution of trade.

11. The percentage distribution of the import and export trade of the Federated Malay States for the last two years was as follows:

	Imports, 1925.	Imports, 1926.	Exports, 1925.	Exports, 1926.
Singapore	45.43	43.25	22.00	22.56
Penang	23.31	21.22	29.75	26.17
Malacca	1.13	1.01	3.30	2.89
Unfederated Malay States	2.38	1.38	0.23	0.26
United Kingdom	12.00	13.35	15.47	18.62
British Possessions	5.47	5.95	0.72	1.22
Foreign countries	10.28	13.84	28.53	28.28
	100%	100%	100%	100%

Revenue from Customs, etc.

12. The total revenue from Customs, Excise and the Chandu Monopoly amounted to $54,123,168, constituting a fresh record, being $9,758,952 in excess of the previous highest record reached in the year 1925.

Import duties contributed $8,572,962, an increase of $1,537,140, export duties aggregated $27,053,261, an increase of $4,099,994, and excise duties, licences, etc., produced $2,276,704, shewing an increase of $460,926 as compared with the receipts for 1925.

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The total values of imports and exports (including re-exports, bullion and parcels post) for the last six years are as follows:

	Imports.	Exports.	Trade balance in favour of exports.
	$	$	$
1921	103,012,606	135,485,376	32,472,770
1922	78,822,349	140,429,775	61,607,426
1923	89,088,237	197,100,950	108,012,713
1924	97,436,302	212,884,740	115,448,438
1925	137,116,207	411,878,610	274,762,403
1926	173,887,724	445,600,203	271,712,479

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Penang	23.31	21.22	29·75	26.17
Malacca	1.13	1.01	3.30	2.89
Unfederated Malay States	2.38	1·38	0.23	0.26
United Kingdom	12.00	13.35	15.47	18.62
British Possessions	5.47	5.95	0·72	1.22
Foreign countries	10.28	13.84	28.53	28.28
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Opium.

13. The nett revenue from the Chandu Monopoly was $15,110,897 as compared with $11,942,811 in 1925.

The year 1926 was the first year during which no licences were issued to private individuals for the sale of chandu: all retail shops and smoking saloons were directly supervised and controlled by officers of the Chandu Branch of the Trade and Customs Department.

The increase in revenue from the sale of chandu amounted to just over three million dollars due mainly to the continued prosperity of the country.

14. There was a marked decrease in rubber smuggling during the year due (*a*) to 100 per cent. of standard production being exportable from 1st February, 1926, and (*b*) to the prolonged spell of dry weather owing to which many estates were unable to produce their exportable allowance. With a more generous rainfall towards the end of the year smuggling tended to increase.

The following comparative table gives the number of seizures, convictions, fines imposed and quantity of rubber seized for the whole restriction area during 1925 and 1926:

	No. of boats seized.	No. of persons convicted.	Fines imposed.	Quantity seized.
1925	284	715	$3,048,850	6,646 pikuls
1926	58	130	544,421	1,419 ,,

In order to counteract the activities of smugglers powers were given to certain Preventive Officers of the Customs Department under the Rubber Supervision Enactment and a great deal of attention was devoted to inspection of rubber dealers' premises and books. The following figures shew the progress made:

	Prosecutions.	Convictions.
Rubber Supervision Enactment	61	56
Rubber Restriction Enactment	24	23

As a result of these prosecutions a large quantity of rubber was seized and many vehicles confiscated.

Shipping.

15. The number of ocean-going steamers, which called at Port Swettenham during the year, was 595 with a tonnage of 2,349,066 against 481 with a tonnage of 1,898,804 in 1925. The number of local steamers calling at the port was 751 with a total tonnage of 371,613 against 690 with a tonnage of 434,110

in the previous year. The total number of vessels, other than native craft, which entered and cleared at the various ports of the Federated Malay States, aggregated 11,093 with a total tonnage of 6,714,015 as against 11,659 vessels in 1925 with a total tonnage of 6,112,641.

16. During the year, 135 bankruptcy notices were issued, 62 bankruptcy petitions filed, 35 receiving orders and 33 adjudication orders made. Bankruptcy.

There was a decrease in the work as compared with the preceding year in Selangor and Negri Sembilan, but a considerable increase in Perak.

Four compositions were approved by the Court.

Two orders of committal were made, and there were two convictions for absconding.

Fifteen applications were made for discharge: eight were granted.

III.—LANDS AND SURVEY.

17. There was at the end of the year in private occupation about 2,345,083 acres held under agricultural titles, and 195,123 acres held under mining titles. Area under title.

18. It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 14.3 per cent. is land in private occupation, 19.2 per cent. is forest reserve and 66.5 per cent. is still State land, including land reserved for other purposes than forests.

19. The land revenue (including $1,691,367 derived from land sales), amounted to $6,199,206 as compared with $4,658,899 (including $561,493 derived from land sales) collected in 1925. Land revenue.

20. The cost of the Survey Department, Federated Malay States, is summarised as follows: Cost of Survey Department.

	Expenditure.	Revenue.	Nett cost.
	$	$	$
Revenue Account	1,193,081	372,355	820,726
Capital Account	385,559	106,141	279,418
	1,578,640	478,496	1,100,144

21. The actual amount earned on Revenue Surveys, not taking into account partly completed work, according to the schedule of survey fees in force, was $409,000 or 50 per cent. Revenue Surveys.

of the cost of the Revenue Branch. It is hoped to increase this percentage appreciably. During the year there was a large demand for land both for agriculture and mining. The apparent progress of surveys would have been greater as shown in percentage of earnings, had the policy not been to do just so much work on a large number of requisitions as would allow the owner to enter into occupation. There is therefore a lot of work partly completed. This applies more particularly to mining land, but it is also true of a large area of agricultural land in Negri Sembilan where the policy of surveying an actual road trace through the area led to inevitable delay in designing the lay-out of the area and in the consequent final survey, but occupation was rendered possible in advance of the final preparation of the title.

Topographical.

22. The work of the Topographical Branch was distributed in Pahang, Penang and Kedah, while the detailed surveys of the towns of Kuala Lumpur and Ipoh were continued. Shortage of coolie labour prevented the area surveyed in Pahang from being as great as was hoped. In the Federated Malay States the standard map work will be continued in Pahang and pushed forward ahead of development as fast as possible.

The Trigonometrical work was confined to some revision work in Perak and to second and third order work in advance of the Topographers, together with a certain amount of accurate levelling for the Public Works Department.

Training.

23. The systematic effort to improve efficiency has been maintained and in addition to inspections the scheme of collecting the Assistant Surveyors in a camp for a month's intensive training was tried. It proved such a success that in 1927 it will be repeated with the Federated Malay States as a unit instead of having a separate camp in each State. The results both of the camps for field officers and of the classes for the office staff are very encouraging.

Maps.

24. The Map Production Branch has maintained the high quality of its publications and one of the most striking features of the year has been the very large increase in the demand for maps and plans by the public. The State maps showing alienated land are all up-to-date to the end of 1925 not only for the Federated States but also for Kedah and Johore, and the General Map of Malaya has been brought up-to-date to the same period and printed with distinguishing colours for the different States.

Recruiting.

25. The need of a proper building for a Technical School and of a hostel for the students is very keenly felt and is very prejudicial to recruiting the right type of apprentice. There is a very serious shortage of field subordinates and it will be several years before the effect of present recruiting is felt. The training period both for field and office apprentices is four years. Experience has shown that it is unwise to cut down this period by more than one year even for the most promising recruits, but the system now in force, i.e., two years in the Technical School and two years in office or field, should in time result in a really efficient staff.

General.

26. A noteworthy feature of the year was the invitation from the Unfederated States of Kedah, Johore and Kelantan to the Surveyor-General to make a report on the surveys in those States. The invitations were very welcome as visits of that nature enable the Head-Quarters staff to keep in touch with seconded officers and lead to the introduction of systematic methods of work. Reports were furnished to the respective Governments during the course of the year. The annual conference attended by the Superintendents of the Straits Settlements and of all the Malay States was held in October.

IV.—GEOLOGY AND MINING.

Geology.

27. Progress was made with the geological survey in Johore and in Trengganu. No further work was possible in Kelantan. A map showing the progress of the geological survey, on the scale 1 inch=6 miles, was prepared; also a new map of the Kinta tin-field based on the one inch topographical survey, to replace the 1913 geological sketch-map. A geological survey of Malacca was completed and a geological map printed. Two new minerals were identified, "thorotungstite", and an hydrated magnesium borate, the former occurring on the Kramat Pulai Ltd. Mine, the latter in the rich tin-deposit in the limestone of the Beatrice Mine, Selibin. The Assistant Geologist, Mr. E. S. Willbourn, was selected as a delegate to attend the Pan-Pacific Science Congress at Tokyo.

Export of tin.

28. The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 45,947 tons compared with 45,926 tons in 1925 and 44,043 tons in 1924. The export of tin-ore represents about 88 per cent. of the total. The export duty (in millions of dollars) was $15.6 in 1926, $14.00 in 1925 and $12.26 in 1924.

Price of tin.

29. The year opened with the price of tin at $142.37 per pikul, by the end of January the price had fallen away slightly to $136.87, it recovered to $144.12 by the middle of March and then sagged again until by the 8th of June it had dropped to $131.75, the lowest price for the year. Thereafter an improvement took place which culminated in the highest price for the year being reached, viz., $157.50, on the 8th of October. From then until the close of the year the price remained comparatively steady, the closing price at the end of the year being $152.37. The average price for the year was $144.59.

Fluctuations in price of tin.

30. The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

Heading.	1920.	1921.	1922.	1923.	1924.	1925.	1926.
	$	$	$	$	$	$	$
Highest ...	212.00	*115.00	93.62	121.00	148.00	145.50	157.50
Average ...	150.67	85.04	80.64	101.75	124.19	131.77½	144.59
Lowest ...	90.00	72.00	71.75	88.50	100.75	116.00	131.75
Fluctuation	122.00	43.00	21.87	32.50	47.25	29.50	25.75

* Government purchase price.

Labour.

31. The labour force engaged in mining (including dulang pass holders) was 116,216 at the end of the year. The figures for the preceding three years were: in 1925, 115,049; in 1924, 114,273; in 1923, 104,556. The total does not include labour employed on the extraction and transport of firewood. The shortage of labour greatly decreased towards the end of the year, though there was an increase in wages.

Tungsten.

32. The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for this and the previous year:

	Wolfram.	Scheelite.
1926	49.40 tons ...	40.18 tons
1925	131.48 ,, ...	27.02 ,,

Gold.

33. The production of gold from the Raub Gold Mines was 12,981 ounces as compared with 12,526 ounces in 1925. In addition alluvial gold was recovered in various places to the extent of 1,483 ounces.

34. The production of coal from the Malayan Collieries Limited, Selangor, was 456,522 tons, an increase of 48,788 tons on the previous year. Consumption was as follows: Coal.

Federated Malay States Railways	218,336	tons
Mines	205,202	,,
Other F.M.S. consumers	4,498	,,
Exported	349	,,
Consumed at the Collieries	28,137	,,
	456,522	,,

The Enggor Coal Syndicate Limited, Perak, which reached the producing stage in the latter part of 1925, produced during 1926, 7,762 tons. The output was consumed as follows:

Federated Malay States Railways	1,155	tons
Mines	5,530	,,
Other F.M.S. consumers	84	,,
Exported	—	
Consumed at the Collieries	993	,,
	7,762	,,

35. The demand and search for dredging land is keener than ever, principally in the Kinta and Klang river valleys. Fifty dredges were at work, 21 under construction and 41 proposed to be constructed. The depth at which dredging is now carried out increases, 85 feet having been accomplished and as much as 120 feet contemplated. Bucket dredging.

36. The popularity among the Chinese of gravel pumps is as great as ever, the number now used being 577. Gravel pumps.

37. Only one theft of ore, involving three pikuls, was reported during the year. Drastic action was taken under the Enactment, after due warning had been given, to deal with an outbreak of petty pilfering of ore from the Sungei Besi Mines. The action taken had the desired effect. Mineral Ores Enactment.

38. The floods in December did remarkably little damage to mines on the whole. Raub Gold Mines was rather badly flooded however and considerable damage was done to the Pahang Consolidated Company Limited's property by destruction of the railway, godowns, and the village buildings. Two small mines were flooded but the main workings escaped. Floods.

V.—FORESTRY.

Expansion.

39. The year 1926 will probably be looked back upon as one marking the beginning of a new chapter in the history of the Forest Department. The first stage in the scheme for the expansion of the department was approved in detail by the Secretary of State; the department entered into possession, and began the development of, the area allotted to it for experimental plantations and for the establishment of a research institute and vernacular forest school; sanction was accorded to the appointment of an additional Chemist to the Agricultural Department for chemical work in connection with forest products, and to the appointment of a Forest Engineer to give advice and draw up plans in connection with the departmental exploitation of a forest on modern lines and the establishment of an up-to-date sawmill; an experimental wood-preservation plant was ordered; and the purchase of up-to-date timber-testing equipment on the lines recommended by Mr. Kent in his report of 1925 was approved by the Finance Committee of the Federal Council.

Staff.

40. At the beginning of the year there were 29 officers on the senior staff of the Malayan Forest Service in addition to the Controller of Timber Supplies and the Timber Accountant. Two of these were on deputation in Johore and one in Kedah. Four Assistant Conservators and a Reconnaissance and Plantations Officer were appointed during the year, and at the end of the year another officer was under training at Oxford. One officer retired.

The strength of the locally-recruited English-speaking staff at the beginning of the year was 15, of whom one was on service in Johore and two and one were under training in Burma and India respectively; two probationers were confirmed in their appointments; and two other probationers began their training. One officer died.

The sanctioned strength of the subordinate forest staff was 478.

Reserves.

41. At the end of the year there were 5,340 square miles of reserved forest, and 937 square miles notified as proposed reserves. The declared policy of the Government to aim at making the country permanently self-supporting in timber, firewood and charcoal was subjected to some criticism in the Federal Council and the press, but the Government sees no reason to modify its decision.

42. Labour conditions continued exceedingly difficult and, in spite of an increased outturn of timber, the demand for building material could not be supplied. The Committee which sat throughout the year to consider the question of the timber supply and other cognate matters made certain recommendations which it is hoped will lead not only to an increased output and cheapening of timber, but to the use of a wider number of timbers. Some of the most important of its recommendations, namely, the installation of wood-preservation and testing plant, and the appointment of a Forest Engineer, are already being acted on. Negotiations are also proceeding to introduce jungle workers from India with a view to the better exploitation of timber and minor forest produce, and to the carrying out of important sylvicultural operations which have now to be neglected to the detriment of the forest. In this matter we have received and are still receiving most valuable and willing assistance and advice from officers of the Forest Department in Madras, the Chief Forest Engineer from that province, while on leave in the United States and Canada, at very considerable inconvenience to himself, having interviewed a number of candidates for the post of Forest Engineer. Outturn.

The outturn of timber, fuel and charcoal on which payment was made was 877,137 tons compared with 844,605 tons in 1925. There was a large fall in the output of gutta-percha owing entirely to the want of suitable labour. The output of damar fell slightly in Negri Sembilan, but showed some improvement in Northern Perak. The hopes of an increased output as the result of the introduction of a system of bonuses were not fulfilled. In Negri Sembilan the trees are capable of giving occupation to a far larger number of tappers than are actually employed, but it seems difficult to attract the Malays. The cane and jelutong industries are disappointing and difficult. Federated Malay States Jelutong fetches better prices than the product of Borneo, but the tappers cannot be persuaded to comply with the tapping regulations. We cannot allow the trees to be destroyed, and a complete reorganization of the industry may be necessary. The chief difficulty is to keep supervision charges within reasonable limits, and this can be accomplished only by securing an adequate permanent labour force which will work a number of forest products simultaneously.

The department had a large exhibit of furniture at the Agri-Horticultural Show in Kuala Lumpur, as well as exhibits of wood-distillation products and veneers. A large quantity of fancy furniture was sold.

Research.

43. Useful chemical and other investigations, chiefly by Chemists of the Agricultural and Medical Departments, and by Mr. T. Hedley Barry of London, were made into *damar penak*, keruing oil, dragon's blood, jelutong, and certain medicinal plants. Of particular importance is the discovery of a coagulant and preservative for jelutong, which will be both simple in operation and will not infringe the pure food law of America. It is believed that a really satisfactory process has now been discovered.

Important additions have been made to the herbarium and wood collections, and a useful start has been made with a collection of microscopic slides and photo-micrographs of our commoner woods, begun by Capt. Woolley while on study leave at Oxford in 1925.

The Illustrated Manual of Commercial Timber Trees by Dr. Foxworthy was sent to the press, and good progress was made by Mr. Watson with his list of the vernacular and botanical names of trees. Valuable assistance has been received from Dr. van Slooten of Java in the study of the Dipterocarps.

A wood-distillation plant started operations at Kerambit in Pahang, and was just beginning to get its products on to the market when the railway was destroyed and the plant damaged by the severe floods at the end of the year. It is however hoped that the cessation of work will be only temporary.

In February a conference of forest officers was held, at which officers from India, Sumatra and Sarawak were present. The opening meeting was attended by the Chief Secretary, Sir George Maxwell. A number of papers were read and discussed, and some important decisions were taken.

VI.—AGRICULTURE.

Staff.

44. The establishment of the Department of Agriculture, excluding the Secretary for Agriculture who is not a technical officer, comprises 36 European officers—26 on the Research Staff and Experimental Stations and 10 on the Field Staff, the latter including two officers in the Colony and one in Johore. Three field appointments were filled by temporary officers at the beginning of the year; of these one was taken on the permanent staff, one left at the end of the year and one remains. A Second Assistant Mycologist was appointed during the year. The substantive appointments of Assistant to Secretary for Agriculture, Second Assistant Economic Botanist and Second Assistant Entomologist were not filled during the year.

45. The price of rubber in Singapore opened at $1.54 per lb. but declined steadily during the first two months and fell to 85 cents per lb. at the end of February. During March it rose temporarily to $1.08 per lb. but subsequently declined till it reached 65 cents per lb. at the beginning of May. It subsequently remained steady between 65 and 75 cents per lb. till November when it fell to 60 cents per lb. At the close of the year it stood at 65 cents per lb. Rubber.

46. The rubber exported from the Federated Malay States during 1926 was 160,213 tons, including 2,059,655 gallons (3,218 tons) of latex, as compared with 118,590 tons (including 2,292,282 gallons of latex) in the preceding year. The export in 1924 had been 94,731 tons. Exports of rubber.

47. The Rubber (Restriction) Enactment remained in force throughout the year. At the beginning of 1926 the percentage of release was 85 per cent., which was raised to 100 per cent. for the restriction quarter which began on the 1st February, 1926. The restriction scheme, as hitherto constituted, had provided for increases not exceeding 10 per cent. for any one quarter. The 100 per cent. rate remained in force during the last three quarters of the restriction year. "Restriction."

A further change in the restriction scheme was made during the year by the Secretary of State's announcement that if the average London price of rubber during the quarter should be less than 1*s*. 9*d*. per lb. the rate of release for the next quarter would be reduced to 80 per cent. As the average price for August-October quarter was below 1*s*. 9*d*. the percentage of release was reduced to 80 per cent. on the 1st November, 1926.

48. From the 1st May, 1926, the maximum of 500 lbs. per acre per annum governing the standard production of holdings of more than 25 acres in area was abolished, and it became possible for such a holding to obtain an assessment of any amount which it might be proved capable of producing; and at the same time the maximum assessment of holdings not exceeding 25 acres in area was raised from 320 to 400 lbs. per acre. Standard production.

The "Standard Production" at the end of the fourth restriction year was 182,208 tons for the Federated Malay States. This is an increase of 22,334 tons over the "Standard Production" for the previous year.

49. *General Conditions.*—The average price realised during the year was sufficient to maintain all properties in good order and yield a fair profit to owners or shareholders. Many of the smaller holdings have improved in condition.

The first four months of the year were unusually hot and dry, causing an exceptionally thorough and simultaneous "wintering" (annual leaf-fall) of rubber throughout the country.

Disease.—This severe wintering naturally had the effect of reducing the output during the dry months but had a beneficial effect in checking bark diseases, especially "Mouldy Rot" (*Sphaeronema fimbriatum*). "Mouldy Rot" however became very prevalent again during the wet season in the last quarter of the year.

"Pink Disease" (*Corticium Salmonicolor*) was less in evidence than in former years. "Wet Rot" (*Fomes pseudoferreus*), a root disease of old rubber, was the subject of special investigations by the Mycologist who was able to devise a method of saving a considerable percentage of trees attacked, by excision of diseased roots, at an economic cost, except in cases where the infection was at an advanced stage.

"Dry Rot" (*Ustulina Zonata*) is often found associated with "Wet Rot" and may be controlled in a similar manner provided general sanitation work is given adequate attention.

50. *Rubber Research Work.*—Investigations by the Chemical Division included work on the variation in tensile strength of vulcanised rubber, further enquiries concerning the use of alum as a coagulant and investigations on preserved (ammoniated) latex with a view to standardising the method of extraction of "dry rubber" content.

The work on latex was continued by the Plant Physiologist and a waxy substance has been isolated which appears to account for some of the coagulation phenomena.

The Entomologist on one occasion found that the caterpillars of a mantriid moth had not only seriously damaged a cover crop (centrosema) on an estate but had also migrated thence to young rubber and fed on the leaves. The possibility of damage to rubber through pests on cover crops is easily exaggerated but should always be remembered and guarded against.

51. *Rubber Research Institute.*—The Director (Dr. G. Bryce) was appointed and assumed duty on 26th September, 1926.

The Institute was officially opened on the 1st November, 1926, although the laboratories are not yet properly equipped and only a few members of the staff were appointed before the end of the year.

The Rubber Research Institute should serve the needs of all classes of rubber growers in Malaya. It will relieve the Department of Agriculture of most of the work connected with rubber except the work of control of diseases, and enable the department to devote more time and attention to investigations on the other major crops, rice, coconuts and oil palms, to the improvement of minor crops, vegetables, fruit trees and stock and to experiments with plants likely to provide suitable new crops for Malaya.

52. At the beginning of January the Singapore price of copra was $12 per pikul. During the year it varied between $12.30 and $10.10 to which price it had declined at the end of December. The average price was about $11.80 as compared with $12.15 in 1925. Coconuts.

The industry has continued in the same satisfactory condition as in the last four years.

Experimental Investigation.—Records of yields from individual palms which have been maintained for six years on an estate show the value of selection work on the crop. Palms selected as high yielders continue to demonstrate this character convincingly.

The experimental area under the department near Klang has been kept in good condition.

Diseases and Pests.—The Black Coconut Beetle (*Oryctes rhinoceros*) still gives trouble and requires continual attention. The most important feature of the year was however a further outbreak of the new disease which is now known as the Salmon Pink Disease. The Mycologist continued his investigations of infected palms from various parts of the Peninsula and thus found certain fungi definitely associated with the somewhat variable symptoms recorded.

Further work is being continued for the full elucidation of the cause and development of this disease or combination of diseases.

53. Owing to comparatively poor crops in Kedah and elsewhere the local price of padi has been well above the average. The crop in Krian was only 2 per cent. below the average of the last twelve years in spite of severe floods in November, 1925, and virulent attacks by a fulgorid insect which appeared in enormous numbers in Krian and Larut but disappeared as quickly as it came. Padi.

It is satisfactory to note that selected strains of padi from the Experimental Station showed much greater resistance to this pest than unselected strains.

Crops generally were much below the average in the large producing areas outside Krian—considerable areas were completely ruined by floods towards the end of the year along the Perak river, in Temerloh (Pahang) and in South Selangor.

Ten thousand gantangs of selected seed padi were distributed from the Experimental Station at Titi Serong for the needs of the 1926-1927 season. In addition to Titi Serong, which was well maintained, other Test Stations at Talang (near Kuala Kangsar) and Dong (Raub) gave satisfactory crops and supplied considerable amounts of selected seed to local growers.

New Test Stations were established at Bota (Perak) and Kajang (Selangor) during the year.

The 1926-1927 harvest will be only about 70 per cent. of the normal owing to the disastrous floods at the new year which completely wiped out all crops near the Perak and Pahang rivers.

An average crop had been expected from Krian but it is now thought that it will only be about 13 million gantangs against an average of 14 millions. In some parts of the country the steady rain for some days after Christmas, 1926, saved the crop which would otherwise have failed owing to the previous long spell of dry weather.

The special rat destruction campaign was continued in Krian throughout 1926, as a result of which over 673,000 rats were accounted for against 657,000 in the previous year.

While these results have greatly reduced the damage caused by this pest, there seems no hope of exterminating them, and it will be necessary therefore to continue the work, so long as the cost seems justified by the damage prevented.

Other crops.

54. *Oil Palm.*—Interest in oil palm cultivation has been well maintained, the area alienated for this cultivation being over 30,000 acres, of which over 10,000 acres are actually planted. Three estates have reached the bearing stage, two being equipped with modern machinery for the preparation of a high class oil. The yields for 1926 were 751 tons of palm-oil and 168 tons of kernels.

Further areas of over 100,000 acres in extent, chiefly in Pahang, are provisionally reserved for this cultivation, but it is not yet known if all will prove suitable for the purpose.

The Department of Agriculture is experimenting at Serdang with new varieties of oil palm from West Africa with a view to selecting improved strains of seed for distribution to planters in this country.

Recent improvements in machinery for the extraction of the oil and for cracking the kernels should stimulate this promising industry.

Prices reached for local palm-oil continue to be in advance of those reached by the West African product.

It is of interest to note that during the year under report the Government of the Gold Coast and Nigeria each sent an expert to study the plantation industry here and in the Netherlands East Indies.

Pineapples.—The importance of pineapple cultivation in Malaya was emphasised in the report of the Imperial Economic Committee.

The principal areas under cultivation and factories are in Johore, the only factory in the Federated Malay States being at Klang.

The Chinese producers are now making efforts to improve the grading of the local product, which by its cheapness is much in demand in the United Kingdom.

Nipah.—The possibilities of nipah palm estates as a future source of power alcohol have recently attracted some notice.

There are two existing estates in Selangor with a planted area of over 900 acres varying in age from a year to nearly four years. The growth is reported to be excellent and the older palms are already fruiting. The department has records of yields taken over a period of two years from some palms eight to nine years old growing in conditions less favourable than those on estates.

These records show that very high yields of 1,000 gallons of alcohol per acre per annum are quite probable and if such difficulties as maintaining a large enough tapping force and finding a stable and satisfactory market can be overcome the prospects would appear to be very bright.

Areca Nut.—A special investigation into the varieties and grades of this product was made by officers of the department and the results published. This appears to be a crop which would justify expansion under plantation conditions.

Tuba Root (*Derris spp.*).—The position of tuba on the world's market was studied. The efforts of the Department of Agriculture have resulted in various insecticide manufacturers carrying out experiments regarding the economic use of this product.

Gambier.—A study was made of the tannin content of commercial samples of gambier as compared with the ruling prices of the same samples. The conclusions point to the fact that prices and quality were not necessarily comparable. The relationship of production and markets also received consideration. An account of this work was published in detail.

Government Experiment Station.—Among other minor crops which received special attention at the department Experiment Station at Serdang was Sisal Hemp (*Agave rigida* var *sisalana*) a commercial sample of some three tons sent to England being very well reported on.

An interesting experiment from a medical point of view is being made with Hydnocarpus, the seeds of which yield chaulmoogra oil, of special value in the treatment of leprosy. Some trees at Serdang seeded for the first time in 1926 and a special report on them was sent to the Royal Botanic Gardens, Kew.

Experiments with tapioca were continued and the results obtained have enabled the department to recommend that the prohibition on this cultivation be removed, as, under proper conditions, it may be a very useful catch crop in connection with permanent cultivation such as rubber, provided only two crops are taken without manuring.

The Government Rubber Estate at Telok Anson (Castlefield Estate) being no longer required for experimental purposes was sold in February, 1926, realising the good price of $210,000 or $1,066 an acre.

Good work was done on the experimental area at Cameron's Highlands, where tea and cinchona are being cultivated, some 80 acres being opened and part of it successfully planted.

Agricultural shows.

55. The Malayan Agri-Horticultural Association held a successful four days Exhibition at Kuala Lumpur from August 27th-30th. Under the auspices of this Association District Shows were also held at seven centres in the Federated Malay States.

56. The report was received of a Committee appointed to consider proposals for the establishment of a School of Agriculture. The proposals are receiving the consideration of Government. School of Agriculture.

57. The Department of Agriculture continued to publish its monthly *Malayan Agricultural Journal* in addition to a special bulletin on "Food Plants of Some Malayan Insects". A quarterly agricultural journal in Malay was also published regularly, and arrangements made to issue a similar publication in Chinese early in 1927. Publications.

VII.—LEGISLATION.

58. Thirty-one Enactments were passed during the year, of which nineteen were amending Enactments and six codifications and re-enactments. The more important amending Enactments were the Probate and Administration Amendment, which was an attempt to deal with the vexed and difficult question of succession on the death of the owner of land held by entry in the mukim register, Registration of Schools Amendment, whereby the control of the Director of Education was strengthened, Planters Loans Fund Amendment, which authorised the loan of money from the fund for purposes other than agricultural, Courts Amendment, which gave the Court of Appeal power to enhance an inadequate sentence passed by a Judge and also provided for a judicial vacation, and Rubber Restriction Amendment, which incorporated the Secretary of State's directions as to the limitation of the term of export rights.

The laws with regard to Agricultural Pests, Water Supply, Second-hand Dealers and Lepers were codified and re-enacted with considerable expansion in the two last cases.

The most important Enactments passed during the year were the Criminal Procedure Code, the Land Code and the Health Boards Enactment, each of which deserves special mention.

The first of these re-enacts as a Federal Enactment the State Criminal Procedure Codes dating from 1902. The new Code has been assimilated in a greater degree to the Code in force in the Colony. The system of trial with the aid of assessors in capital cases has been retained but provision has been made whereby trial by jury may be substituted for this in any State. The Code has been considerably expanded, partly by the inclusion of material taken from the Straits Settlements Code and partly by the inclusion of provisions, e.g., police supervision, formerly contained in separate Enactments.

The Land Code represents the result of several years labour. It is a re-enactment of the law formerly contained in the Land Enactment and the Registration of Titles Enactment. The combination of these in one Code has been rendered possible by the abolition of the remaining differences in the tenure of land held under grant and land held by entry in the mukim register. An attempt has been made in the Code to define more clearly the rights of proprietors and the conditions on which they hold their land, the rights of the State, and the principles and practice of registration.

The Health Boards Enactment is a rather bold piece of experimental legislation. It provides for local Health Boards and empowers them to frame schemes to deal with unhealthy areas, with hospital accommodation and health visiting. A Central Board may approve and direct the carrying out of schemes and for this purpose will be provided with funds to be raised by a cess on the areas affected and a grant in respect of State land within such areas. The Controller of Labour is Chairman of the Central Board, but the membership is almost entirely non-official.

The Former Enemy Aliens (Disabilities Removal) Enactment marks a stage towards the return of normal conditions, and is based on the English Act for the same purpose.

The remaining Enactments passed do not call for special remark.

VIII.—POLICE.

Police.

59. The approved strength of the Force on the 31st December, 1926, was 4,113 officers and men distributed in 178 police stations and 15 posts.

New posts were established at Pedas and Khota in Negri Sembilan. The Force was 99 under strength at the end of the year; of this shortage 77 were Malay and Indian rank and file. Of the 40 Gazetted Officers 5 are Malays, and of the 82 Superior Officers 29 are Malays and other Asiatics.

The standard of training at the Police Depôt both in drill and police duties was maintained and in some respects improved during the year. A miniature rifle range was established which promises to be a valuable adjunct to the Depôt facilities.

Difficulty was experienced in obtaining suitable Malay recruits, but this was got over by reducing the standard somewhat and paying a small bonus per head for recruits brought in for enlistment. A new feature introduced during the year was the establishment of a police camp at Port Dickson which helped to relieve the serious congestion at the Depôt and made a much appreciated break in the Depôt routine for well-behaved recruits.

The Force has from time to time for some years past furnished officers for the Customs Department, Rubber Restriction, the Railway Department, and the Police Force of the Unfederated Malay States, and as these were all selected men the Force is now feeling the drain, especially as the chief former source of supply of Inspectors, the Royal Irish Constabulary, is no longer in existence.

Crime.

60. The state of crime shows a very gratifying decrease. The total number of seizable offences reported in 1926 was 5,642 as against 7,361 in 1925 and an average of 9,363 for the preceding five years.

Gang-robberies numbered 16 as against 18 in 1925, and robberies 40 as against 59 in 1925. These are the lowest figures on record for at least thirty years and when the increase of population is taken into account the present incidence of serious crime is very much below what it has been previously.

The scope of the Criminal Intelligence Branch was enlarged considerably during the year. Reduced pressure due to the general improvement in the state of crime permitted of more attention being given to the habitual or professional thief: the majority of the reported cases of theft and house-breaking with corresponding loss of property may be attributed to the activities of this type of criminal. There is an increasing number of such persons who may not be banished, an inevitable outcome of the changing status of the population, and it is primarily with the object of curbing this element that the Criminal Intelligence Branch is now occupied with a system of classifying and indexing crime and criminals by means of description and *modus operandi*. The initial progress made gives good ground for hope that the system will prove effective not only in providing better preventive and detective measures but, by leading to closer co-ordination of investigation work generally, in releasing more officers and men for other pressing duties such as the control of traffic which is expanding so rapidly.

An improvement has also been effected in the system of keeping in touch with police supervisees, but though supervision is being tightened, care is being exercised that supervisees and registered criminals who show an inclination to earn a living honestly are not interfered with in any way or brought under the notice of their neighbours.

The Criminal Registry was maintained at a high state of efficiency, and a total of 19,756 finger-prints inquiries in respect of current crime were dealt with expeditiously.

The finger-prints of 1,408 persons who had died by sudden or suspicious deaths were submitted during the year for identification and 101 identifications. were established in this manner.

Fires.

61. There were 307 outbreaks of fires, in only 12 of which was the damage stated to exceed $10,000.

IX.—PRISONS.

62. There are six prisons. On the 1st January, 1926, there were 1,001 prisoners against 1,194 on the 1st January, 1925; during the year 4,506 were admitted; and 944 remained at the close of the year. The daily average figures were: Civil Prison, 106; short-sentence and revenue grade, 434; long-sentence and condemned, 465. Five executions were carried out. Three prisoners escaped. One prisoner committed suicide. The daily average of sick was 1.51 per cent. as compared with 2.19 in 1926. There were 15 deaths, of which 2 were from malaria, 1 from phthisis, 1 from pneumonia and 11 from other causes of which debility may be presumed to be the cause or predisposing factor.

63. The total expenditure of the prisons totalled $455,207. The daily average of 1,005 prisoners was maintained at a nett cost of $398,246 (the prison revenue being deducted), giving an annual cost per head of $396. The annual cost in 1925 had been $335 and in 1924 $307. The reason for the increase of $61 over the figure for 1925 was principally due to the decrease in the daily average.

X.—MEDICAL.

VITAL STATISTICS.

64. Births and deaths figures are obtained from notifications compulsory under the Registration of Births and Deaths Enactment which is everywhere in force.

Deaths in towns are debited against the town only if the deceased was resident there for three months or more previous to death.

Because of the peculiar age and sex distribution, and the fact that the labour of this country is largely made up of persons aged 20-45, who passed the doctor before embarking for Malaya, the death figures cannot be compared with countries where the labour is indigenous and where age and sex distribution are normal.

65. The population of the Federated Malay States as estimated was at the end of June, 1926, 1,476,032 distributed as follows: Population.

Perak	654,179
Selangor	457,170
Negri Sembilan	204,257
Pahang	160,426

Assuming that the races remain in the same proportion as in the Census year, the race distribution is as follows:

Europeans and Americans.	Eurasians.	Malays and other natives of the Archipelago.	Chinese.	Indians.	Others.
6,947	3,495	558,060	526,733	374,915	5,882

66. Owing to the unprecedented severity of the floods which occurred and which were particularly severe in Pahang resulting in the complete destruction of the records of the Registrar of Births and Deaths in that State, the figures given for births and deaths are for the States of Perak, Selangor and Negri Sembilan only.

67. The number of births registered was 39,834 for the whole year, giving a rate of 30.28 (excluding Pahang) per mille of population as against a birth-rate of 28.89 per mille for 1925. Births.

68. Thirty-eight thousand four hundred and forty-five deaths were registered, giving a death-rate of 29.22 (excluding Pahang) per mille. The number of deaths in 1925 was 34,153 and the rate was 23.60 for the whole Federated Malay States. Deaths.

It is probable that the introduction of more female Tamil labourers bringing with them children of poor physique, and malaria, dysentery and diarrhoea following the heavy rains and floods account for the increase.

INFANT MORTALITY.

69. The number of deaths of children under one year was 7,718 or an infantile mortality rate per thousand births of 193.75 against a mortality rate of 177.17 in 1925. This death-rate which, it is hoped, will be reduced in the course of time, compares favourably with those of other tropical countries.

PUBLIC HEALTH.

Malaria.

70. There were 38,633 cases of malaria treated in hospitals with 1,792 deaths and a death-rate of 4.64 as compared with 23,056 cases with 993 deaths and a death-rate of 4.03 for the year 1925.

Exceptionally heavy rains at the end of 1925 followed by a prolonged drought, and the increased amount of clearing jungle land which followed the rise in the price of rubber may have been important contributing factors.

During the year the anti-malaria measures were in no way relaxed and the distribution of quinine was carried out as usual.

Tablets of quinine to the number of 1,043,200 were issued to the various Health Officers for ultimate free distribution to the public through the Police, the Education Department and the District Officers, also to the Senior Medical Officers for distribution through the various travelling dispensaries.

Lectures, lantern demonstrations, and anti-malaria propaganda were vigorously carried out by the Public Health Education Committee.

General European population.

71. The general health of the European population continues to be good. There was little sickness and invaliding. The total European and American population as estimated at the end of June, 1926, was 6,947. There were 131 births, giving a birth-rate of 19.86 per mille and 36 deaths with a death-rate of 5.46 per mille as compared with a birth-rate of 20.72 per mille and a death-rate of 4.03 per mille in the previous year.

It is necessary to remark upon the increasing number of cases of neurasthenia, Europeans of both sexes being affected.

Pulmonary tuberculosis.

72. The number of cases of pulmonary tuberculosis treated in hospitals during the year under review was 2,329 with 995 deaths and a death-rate of 42.72 per mille as compared with 2,571 cases with 1,051 deaths and a death-rate of 40.88 per mille for the year 1925.

Extensive propaganda in the form of pamphlets was continued by the Public Health Education Committee.

There is no doubt that influenza leaves Asiatics very liable to infection by the tubercle bacillus and as influenza is more common than formerly, tubercle bacillus infections are on the increase. The floods with the exposure and privations were responsible to some extent for the increased death-rate and number of cases. Overcrowding in the towns is also a factor.

The Government Asiatic Staff are all periodically examined for symptoms of pulmonary or other tubercular infection.

73. The treatment of yaws by arsenical compounds was continued. A total number of 30,233 injections were given during the period under review. The number of cases treated in each State in comparison with the number treated in 1923, 1924 and 1925 is shown in the following table: Yaws.

States.	1923.	1924.	1925.	1926.
Perak	14,149	9,884	9,155	9,358
Selangor	4,381	2,231	1,305	1,680
Negri Sembilan	9,358	7,267	6,426	4,543
Pahang	3,247	3,997	9,403	7,893
Total	31,135	23,379	26,289	23,474

The difficulty experienced in persuading patients, who are mostly Malays, to continue injections is still very great, but by making facilities for injections as easy as possible, it is hoped that yaws will be eventually eradicated. Serious cases so common a few years ago are rarely seen and the milder cases are becoming less frequent.

74. There were 480 fresh admissions and 66 deaths from leprosy during the year. Leprosy.

75. There were no epidemics during the year, except one small outbreak of cholera and some cases of measles. Infectious diseases.

76. There has been no outbreak of smallpox during the year under review, and vaccination work was mostly confined to children. The number of vaccinations performed was 113,914 as compared with 126,305 for the corresponding period of last year. Vaccination.

77. Sixty cases of tropical typhus were diagnosed at the Institute for Medical Research during the year. Typhus fever.

78. A small outbreak of cholera occurred in the Kuala Langat district of Selangor, there being 13 cases and 6 deaths. A possible cause of infection was from one of a family who had arrived from India two months previously on an infected ship. These coolies had been inmates of the non-infectious hospital of the quarantine camp. It is possible that a member of this family was an intermittent carrier. Cholera.

Beri-beri.

79. The number of cases treated for beri-beri was 1,075 with 140 deaths and a death-rate of 13.02 as compared with 906 with 98 deaths and a death-rate of 10.81 for the corresponding period of 1925.

Very active propaganda work in the form of pamphlets and advertisements in the vernacular press, warning the public of the danger of using polished rice, were issued by the Committee for Public Health Education.

Venereal diseases.

80. The total number of cases treated during the year was 4,428 with 51 deaths and a death-rate of 1.15 per cent. as compared with 3,688 cases with 91 deaths and a death-rate of 2.46 for the previous year.

The campaign against venereal diseases continues with marked success. Persons of all nationalities seek advice and treatment at the clinics, which are being increased in number.

INFANT WELFARE WORK.

81. Infant welfare work continues with great success and the attendance at the clinics have greatly increased. The numbers attending clinics in Kuala Lumpur, Ipoh, Taiping and Seremban for 1925 and 1926 were as follows :

Place.	1925.	1926.
Kuala Lumpur	23,134	29,831
Ipoh	15,523	14,080
Taiping	18,259	13,559
Seremban (opened in August, 1926)	—	3,895
Total ...	56,916	61,365

It is interesting to note the change that has taken place in the attitude of the parents towards the aim and object of the centres. They were originally full of fears and prejudices and attended only after much persuasion and in a very hesitating manner; they vouchsafed no signs of approval or otherwise at the instructions given them and appeared completely mystified and far from happy. To-day on visiting the centre one can see for oneself that these same people are now thoroughly at home and have lost their fears, their attendance weekly is regular and they bring not only their own babies but persuade their neighbours to do the same.

District visiting is being carried out as much as possible. It is recognised as the most important part of child welfare service and the work done in this direction has been exceptionally good through the year.

INSPECTION OF SCHOOLS.

82. The inspection of schools is still being carried out by both Medical and Health Branches of the department. Frequent visits are being paid to the schools near the main roads by the travelling dispensaries. All schools are supplied with a stock of quinine tablets.

Estate labour.

83. The work under the Labour Code was satisfactory in view of the number of staff. Of 1,450 estates, 725 were visited by Health Officers and of 156 estate hospitals, 154 were visited.

PUBLIC HEALTH EDUCATION.

84. The Public Health Education Committee met on several occasions during the year; at Horticultural Shows exhibitions were put up which were well attended, lectures were given and pamphlets which had been prepared by the Committee were distributed in large numbers in various languages.

Popular lectures on malaria were given in Malay and Chinese in various parts of the country, these were illustrated by lantern slides and were well attended.

A cinematograph film of the work done at the Infant Welfare Centre, Kuala Lumpur, was also exhibited on several occasions to large and interested audiences.

Lectures on venereal diseases, illustrated by lantern slides, were given in Chinese, Tamil and other clubs and institutions.

QUARANTINE AND PORT HEALTH WORK.

85. A very marked increase of immigrants, 99,066 for 1926 compared with 48,748 for 1925, taxed the accommodation at Port Swettenham Quarantine Camp somewhat severely, especially in view of the fact that several successive steamers arrived infected with cholera; the situation was satisfactorily dealt with by the Quarantine Camp staff.

During the year 75 ships with immigrant labourers were boarded and inspected. The labourers were landed at the Quarantine Camp. Of the 75 ships, 21 were infected—eight with cholera, two with cholera and smallpox, four with smallpox, one with cerebro-spinal meningitis, one with cholera and cerebro-spinal meningitis, five with chicken-pox.

MEDICAL INSTITUTIONS.

86. There were on the 31st December, 1926, in the Federated Malay States, the following medical institutions:

4 European Hospitals;
35 District Hospitals (each with an Outdoor Dispensary);
3 Women's Hospitals;
3 Leper Asylums;
6 Gaol Hospitals;
1 Quarantine Camp;
4 Vagrant or Decrepit Wards;
1 Mental Hospital;
1 Pasteur Institute (attached to the Institute of Medical Research);
29 Dispensaries working in towns, distinct from hospitals;
4 Infant Welfare Centres;
4 Venereal Diseases Clinics.

The number of in-patients treated during the year was 127,332 with 9,178 deaths and a death-rate of 7.21 per mille as against 103,762 with 6,964 deaths and a death-rate of 6.71 in the preceding year. Outdoor patients numbered 630,052 as against 621,793 in 1925.

Of the total of 630,052 cases 156,652 were treated by the travelling dispensaries and 16,817 by dispensary boats on the Pahang River. In Selangor a system of house to house visits was inaugurated. The travelling dispensaries staff visited Malay kampongs which were some distance off the road and whose inhabitants would not trouble to attend at the usual stopping places of the travelling dispensary. 460 patients out of a population of 3,416 were treated by these means. It is intended to extend this system as more senior Malay dressers become available.

In 1927 a number of new and improved type of larger travelling dispensaries are to be supplied.

The motor boats dispensaries are under construction, one for the Perak River and one for the Pahang River. The former has now, at the time of writing, been supplied and it promises to be a great success. They will be of immense value to the Malay riverine population.

Mental diseases.

87. There were at the end of 1926, 1,212 male and 338 female patients at the Central Mental Hospital.

The total admissions during the year was 735, an increase of 69 on last year, while the discharges numbered 360, of whom 207 were discharged recovered and 76 relieved.

The Medical Superintendent comments on the danger of alcohol taking the place of opium amongst the Chinese.

Pasteur Institute.

88. The Pasteur Institute has been a success : 183 persons were given anti-rabic treatment in Kuala Lumpur. A branch treatment centre was opened in Malacca, the material being supplied from Kuala Lumpur.

Prophylactic inoculation of dogs against rabies were successfully carried out.

XI.—EDUCATION.

Financial.

89. The expenditure upon Education (including $733,286 spent by the Public Works Department on the building and upkeep of schools) was $3,215,528. Of this sum, $440,749 was paid in grants to English aided schools and $47,868 in grants to Chinese vernacular schools.

The total revenue, derived mainly from school-fees, was $123,244.

Staff.

90. The salaries of the Educational Service now compare favourably with any in the Empire and have attracted an excellent type of recruit. In the future the extension of the European staff will be due largely to recruitment of experts for special subjects.

A revision was made in the salaries of untrained Malay teachers, who have generally done excellent work.

Higher education.

91. At present the highest local educational institution open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore.

The building of Raffles College, which will provide a higher education in subjects other than medicine, made satisfactory progress, and it is expected that the College will open in 1928.

The Malay College, Kuala Kangsar, receives probationers for the Government service.

Evening classes.

92. Evening classes were held in all the States. In Perak and Negri Sembilan the only classes in demand were those for elementary English. In Kuala Lumpur the curriculum comprised English, shorthand, book-keeping, typewriting,

machine drawing, magnetism and electricity, electrical engineering, workshop mechanics, surveying, engineering and art. Of the students who joined these Kuala Lumpur classes, a large percentage consisted of apprentices in Government workshops. In Pahang there were classes in English, arithmetic and typewriting.

There were Normal Classes for teachers in all the States except Pahang, where correspondence classes had to take their place.

Scholarships and free education.

93. Of the 14,755 pupils in English schools, 373 held Government scholarships, enjoying free education, board and lodging; 87 held other scholarships; 2,977 received free education from the Government and 316 free education from other sources. Thus, 3,753, or 25.44 per cent., receive a free education.

All pupils in Malay vernacular schools enjoy free education.

English schools.

94. There were 22 English Government schools for boys, 13 English grant-in-aid schools and 11 for girls. The total average enrolment was 5,702, 6,107 and 2,946 respectively.

Malay College, Kuala Kangsar.

95. The expenditure on the Malay College, Kuala Kangsar, was $94,668. At the end of the year there were 117 students, all boarders educated and maintained entirely at Government expense.

Two boys died during the year. The general health of the boys was satisfactory.

A new swimming pool was opened during the year.

Cricket, hockey and association football are played regularly.

Cadets and Scouts went into camp in September, a first and most successful experiment.

During the December floods the ground floor of the College was flooded to a depth of 18 inches. The Sultan of Perak sheltered the students at one of his palaces while the College was filled with local refugees.

Sultan Idris Training College.

96. At the beginning of the year there were 275 students and two probationers in residence at the Sultan Idris Training College for the training of Malay vernacular teachers. After the fasting month 72 students and one probationer completed their course and left and 127 new students and one probationer joined.

The total expenditure was $129,463, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements.

The curriculum comprises the Malay language and literature, Malay history, geography, the theory and practice of teaching, physical training, rural science and handiwork. A few students learnt music.

The educative value of a cinema installed at this College was reflected in students' essays.

The College provides two platoons for the Malayan Volunteer Infantry.

Malay vernacular education.

97. The Malay vernacular schools are all Government institutions and provide free education. There are 401 schools for boys and 67 for girls with average enrolments of 27,026 and 3,235. The Malay teaching staff numbers 1,272.

The modern teacher is taking a keen interest in school gardens and rural science generally, while his knowledge of his own language and history, arithmetic and geography is more scientific than formerly. The work done by the Malay vernacular schools is extremely valuable and fulfils the needs of the Malay villager.

Tamil vernacular education.

98. There are 259 Tamil vernacular schools with an average enrolment of 8,944. Many estates built and equipped new schools. Men with teaching experience were engaged to replace coolies and kanganies who had combined teaching with other duties.

During the year arrangements were made for a European officer with a knowledge of Tamil to report on these schools.

Chinese vernacular education.

99. Three hundred and forty-nine Chinese schools were registered with 722 teachers and 16,882 pupils.

Grants to a total of $47,868 were paid to 47 schools with 4,654 pupils.

With the exception of one middle school for boys in Ipoh all registered schools were primary. The standard of sanitation in all schools has greatly improved.

An Evening Training Class for Chinese teachers was held in Kuala Lumpur. There were 38 students in three classes, each having 15 hours a week. A library of classical and modern Chinese literature is being formed.

XII.—POSTS AND TELEGRAPHS.

Postal.

100. There are now 101 post offices and 57 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered was over 30 millions.

Money orders.

101. Money orders numbering 322,267 were issued and paid, the total amount representing $22,603,346, an increase of 40,548 in number and $3,886,353 in amount. Telegraph money orders numbering 11,474 for $969,459 were issued and paid.

Savings Bank.

102. The number of Savings Bank depositors on the 31st December was 29,803, an increase of 4,179 during the year. The average amount standing to the credit of depositors decreased from $122 to $121. The excess of deposits over withdrawals during the year was $400,751. It is satisfactory to record that the number of Malay depositors increased further from 5,238 to 6,219.

Telegraphs.

103. The number of telegrams despatched and delivered was 975,038, an increase of 110,008 or nearly 13 per cent.

Telephones.

104. The total number of subscribers connected to the telephone exchanges at the end of the year was 3,450, a further unprecedented increase of 623. There were also 1,598 extension lines, extension bells and private lines, etc., maintained, an increase of 197. On 31st December there were 2,618 miles of telegraph and telephone lines and 19,861 miles of overhead wires, of which 16,872 were telephone wires. In addition there were 79 miles of underground cable, the length of the single line in the cable being 7,774 miles. These figures do not include railway wires and Federated Malay States Government wires in Johore, Kedah and Dindings. Five additional public telephone exchanges were opened during the year at Bidor, Kuala Lipis, Parit, Rasa and Rembau respectively. Many new trunk lines were established to connect these exchanges with the system and to meet increased traffic. The trunk telephone revenue was $277,253 or over 30 per cent. greater than in 1925 and 84 per cent. greater than in 1924. The general telephone revenue was $904,513, an increase of 30 per cent. on the figures for 1925. The resources of the department were again taxed to the utmost to meet the urgent demands for telephone service. The number of telephone calls originated was estimated at 11,400,000, including 1,410,000 junction and trunk calls.

Malayan Trunk Telephone Scheme.

105. Reports and estimates in connection with the Malayan Trunk Telephone (Cable) Scheme were received from the Consulting Engineers and the British Post Office towards

the end of the year. The estimates are considerably in excess of the original estimate and the scheme is still under consideration.

106. The nett revenue collected by the department was $2,522,461, an increase of $475,767. Annually recurrent expenditure amounted to $1,847,339 and special expenditure (including loan account) to $633,486. The value of the services performed free of charge for other Government departments, estimated at $183,325, is not included in these figures, which also exclude temporary and acting allowances amounting to $171,625. **Financial.**

107. The co-ordination of the post and telegraph services of the Straits Settlements and Federated Malay States was approved and took effect on the 1st day of October. The Secretary for Postal Affairs resides in Kuala Lumpur and the Settlements and States are divided into five postal districts each in charge of a Controller. **Co-ordination of S.S. and F.M.S. Postal Services.**

108. Forty-nine temporary licences for the use of wireless receiving apparatus were issued during the year and one experimental transmitting licence. The British official news broadcast from the British wireless station near Rugby re-transmitted from Penang by land line and supplied to the local newspapers on payment of a small monthly fee averaged roughly 20,000 words a month. **Wireless.**

109. The floods at the end of December seriously dislocated the postal and telegraph services, particularly in Pahang. **Floods.**

XIII.—PUBLIC WORKS.

110. The total expenditure authorised for the year was $26,705,910, of which $16,273,282 was spent, being an increase of $4,167,764 or 34 per cent. above the previous year. This expenditure has only once been exceeded and that was in the boom year of 1921 ($19,644,908) when the prices of materials were very much higher than during the year under review. **General expenditure.**

The cost of administration ($1,695,162) represents 10.42 per cent. of the total expenditure as against 12.95 per cent. in 1925. The expenditure under Annually Recurrent amounted to $5,100,651 : the unexpended balance was $603,437.

111. The annual maintenance of Works and Buildings cost $1,109,493, which represents 2.86 per cent. of the total cost of the buildings, as against 2.6 per cent. in the previous year. **Buildings.**

Five hundred and fifty-four new buildings were erected. The total number of buildings maintained was ten thousand three hundred and fifty-six, the value of which is $38,799,666. Quarters for twenty-four senior officers and one hundred and seventy-two subordinates were completed. Good progress was made on the construction of the New Electric Power Station, Bungsar Road, Kuala Lumpur. With the exception of the water circulating system, all structural building work was completed. The expenditure was $240,115, which does not include electrical machinery and plant. The Supreme Court, Ipoh, was commenced during the year and good progress was made. Satisfactory progress was made on the construction of the English schools at Seremban and Kuala Kangsar.

Roads.

112. There are 2,565 miles of metalled roads, 160 miles of unmetalled roads and 1,950 miles of bridle-paths. The average cost per mile of maintaining all metalled roads was $1,430 as against $1,308 in 1925. The total expenditure on maintaining roads, streets and bridges was $3,674,911. The total mileage of roads treated with bituminous compounds is 697, of which 186 miles were added during the year.

The year under review has been marked by active operations in repairing the flood damage caused in November, 1925. At the end of the year the country was again visited by floods of unprecedented magnitude, which caused widespread damage to roads in all four States. The approximate estimate of repairing this damage is $2,500,000.

In all districts road improvements, including widening, straightening and raising were carried out.

Rivers.

113. River channels of a length of 606 miles were maintained at a cost of $230,110. The end of the year was characterised by heavy rain storms throughout the Peninsula. Phenomenal floods occurred on all large rivers, notably the Perak and Pahang Rivers. Some phenomenal falls of rain were recorded in the local Press. Measured rainfalls were very irregular. At Kuantan 77¼ inches were recorded during December, with a maximum of 20 inches in one day. The Perak River at Kuala Kangsar rose to a height of six feet above the famous 1897 flood. The flood discharge by this river is estimated to be over 200,000 cubic feet per second. At Kuala Lumpur the town was again inundated. The discharge of the Klang River was practically the same as in 1925, being 8,000 cubic feet per second. The flood discharge of the Kinta at Ipoh was 5,300 cubic feet per second against 6,000 in 1925.

In Pahang phenomenal floods were experienced. Both roads and railways were inundated for great lengths and telegraph and telephone communications interrupted. At Kuala Lipis, the river rose to a height of 64 feet above normal level. The lower street of shop-houses in Kuala Lipis was completely submerged. Several Government bungalows were carried away, stores were flooded and records lost. Land slips were frequent, the largest slip probably occurred at Sungei Lepar, where an area of jungle, estimated at 3,000 acres, slid into the valley, blocking the river and flooding several miles of the Benta-Kuantan road.

114. The capital cost of all waterworks is $9,643,810; the cost of maintenance for the year was $191,196 and the revenue collected amounted to $551,713. **Waterworks.**

115. A sum of $240,000 was provided under Loan Account for the development of Fraser's Hill, the expenditure being $228,557: the sum spent on maintenance was $73,917 out of a provision of $95,160. **Fraser's Hill.**

116. The development of Cameron's Highlands as a hill station has definitely been decided on by Government. A provision of $252,817 was made for the construction of the road, the expenditure being $250,150. **Cameron's Highlands.**

117. The provision under the loan programme of works for the year was $17,152,851, the expenditure being $7,967,478. **Loan Account.**

118. Tenders generally have exceeded estimates for building and in many cases the exorbitant prices quoted are no doubt due to general attempts at profiteering, which may be attributed to the prosperous conditions at present obtaining in the country and to the fact that there is ample work for every one. **Tenders.**

119. The shortage of trained subordinates is still acute. An officer, sent specially to India for the purpose of recruiting, was successful in obtaining 36 Technical Subordinates, but these men will take some time to become conversant with local conditions and more are still required. **Subordinates.**

XIV.—RAILWAYS.

120. The receipts from all sources were $21,640,545, an increase of 15.46 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $15,213,100, an increase of 8.87 per cent. The nett receipts for the year's working therefore amounted to $6,427,445 compared with $4,770,316 in 1925. This represented 3.13 per cent. on the capital expenditure against 2.39 per cent. last year. **Working.**

Railway rates.

121. A revised Tariff Book was brought into force in January, 1926. In this the number of classes of rates provided was increased from 9 to 19, thereby giving elasticity in charging the various grades of commodities offered for conveyance.

Train control.

122. A system of train control introduced in January, 1922, over a busy section of the line covering 105 miles has proved very satisfactory in controlling the movement of rolling stock; checking unnecessary haulage and in cases of breaches on the line expeditiously restoring communication. With the introduction of this system an enormous number of telegrams have been reduced. The system has been extended and now controls the main line between Ipoh and Seremban.

Passenger traffic.

123. The number of ordinary passengers carried was 12,552,621 in 1925, and 14,555,190 in 1926. The number for the year therefore shews an increase of 15.95 per cent. over that for the previous year. The total receipts from passengers shew an increase of $2,002,842 (29.56 per cent.).

Goods traffic.

124. Receipts from goods train traffic rose by $287,251 from $9,141,342 to $9,428,593, being an increase of 3.14 per cent.

Capital account.

125. During the year the nett expenditure on capital account was $5,441,346 as compared with $3,929,107 in 1925.

Kelantan section.

126. On the Kelantan section the line was opened for traffic as far as Kuala Krai (53 miles) and platelaying completed to the 70th mile and from the 76½ to 82nd mile besides 3 miles near the Pahang boundary. Earthwork is well in hand over the whole section. Nos. 1 and 2 tunnels at the 69th mile have been completed and work in the tunnels at the 74th, 86th and 94th miles is well advanced. The expenditure during the year amounted to $2,735,703.

Pahang section.

127. Work on the Pahang section was reopened at the beginning of 1924 and good progress has been made. Platelaying has been completed beyond the Kelantan boundary at the 188th mile. The tunnel at the 172nd mile is nearing completion. The expenditure during the year amounted to $627,663.

Teluk Ayer godowns. Singapore.

128. The Teluk Ayer godowns at Singapore have not so far been a successful investment, but there has been an increased demand for accommodation during the year. The capital cost to the Government was $1,570,967. The cost to the Government last year was $109,801, made up of $17,600 for assessment, $80,016 for ground rent, and $12,185 for erection of partition and maintenance. The rent received was $113,871. The total leasable area of this property is 298,496 square feet, of which 237,112 square feet were let under agreements for six

months or more, whilst space averaging 21,380 square feet per month was let for shorter periods during the year. The area under rent at the end of the year was 278,112 square feet.

Minor works.

129. The New Engine and Carriage Sheds and Goods Yards at Seremban were completed, and work progressed on the Goods and Marshalling Yards at Ipoh. Good progress was made on the Klang River Bridge. Work is well advanced on the doubling of the line Batu Junction to Kuala Lumpur. The work on the tunnel at Kuala Lumpur was commenced in 1924 and is nearing completion. Progress has been made on the earthwork and bridge for Victory Avenue.

Bukit Serayah.

130. Work on the scheme for a supply of water to Prai from Bukit Serayah was reopened in February, 1925, and was practically completed during the year. The expenditure for the year was $152,271.

Railway Board.

131. The Railway Board held 10 meetings during the year. It has three official and six unofficial members; and of the unofficials one resides in Singapore and another at Penang.

XV.—CO-OPERATION.

European staff.

132. The European Officer in Charge of the department also supervised the development of the movement in the Straits Settlements and the Unfederated Malay States.

Progress, number of societies.

133. The Co-operative movement maintained uninterrupted progress throughout the year. The growth in the numbers of societies, of members and of working capital is revealed in the subjoined tabular statement which shows the position reached on June 30th, 1926—the date on which the financial year of societies closes.

Details.		No.	Membership.	Working capital.
				$
AGRICULTURAL.—				
Rural Credit	1923	6	177	3,175
	1924	20	725	22,267
	1925	42	1,741	38,843
	1926	75	3,172	97,101
NON-AGRICULTURAL.—				
Thrift and Loan Societies	1923	13	2,184	70,286
	1924	19	5,785	268,816
	1925	22	7,202	438,511
	1926	25	9,366	851,314
Grand Total 1926 ...		100	12,538	948,415

New societies.

134. Thirty-six new societies were registered during the course of the year: 33 were rural credit societies and three were salary-earners societies.

Capital and funds.

135. The paid up capital of the societies amounted to $861,595. The total sum issued in loans to individual members and other societies came to $1,185,273 as against $619,847 in the preceding year. The repayment of principal and interest on loans amounted to $842,981 as against $368,484 in the previous year.

Surplus assets.

136. The working and paid up capital of societies multiplied itself about twofold in the course of the year. The cash in hand and in banks and other readily realisable assets which on 30th June exceeded $150,000 had grown to about $250,000 by October 31st, 1926. These surplus assets, for which it is difficult to find a lucrative investment at present, would be absorbed by a Co-operative Bank.

Abolition of "Padi-ratus" system.

137. The members of the Krian co-operative societies, who are padi planters have abandoned the "padi-ratus" system which is the bane of the padi planting industry in this country, and which compels the grower to sell his crop to his creditor sometimes at as low a rate as six cents a gantang. The societies supplied all the credit needs of their members who sold their crops at their pleasure at full market rates, and not necessarily at harvest time at low prices as they were obliged to do in the old days. They secured prices as high as 18 and 19 cents a gantang last year. It is estimated that the members of co-operative societies realised $40 an acre more for their crops than their neighbours and fellow workers who had to borrow money for cultivation and other expenses from professional money-lenders, dealers, or through the other customary channels.

Cessation of Government loans to subordinates and peasants.

138. The Government system of loans granted by Heads of Departments to subordinates in Perak, Selangor and Negri Sembilan has been to a large extent replaced by the work of co-operative societies.

XVI.—GENERAL.

Public Trustee.

139. The year under review was the fourth year of the working of the Department of the Public Trustee. The duties of the Public Trustee are (*a*) to act in the administration of estates of small value, (*b*) to act as an ordinary trustee, and (*c*) to act as a trustee appointed by the Court. During the year, the Public Trustee accepted 18 trusts; in 11 cases he administered the estates of deceased persons, in one case he consented to act as an ordinary trustee and in six cases he was appointed

by the Court. Seven wills or copies of wills were deposited with the Public Trustee. The value of the property held in trust by the Public Trustee at the end of the year is estimated at about $2,700,000.

Volunteering.

140. During the year under review the effective strength of the Malay States Volunteer Regiment increased by 87 all ranks, a most satisfactory feature. Although many young men enrolled there is still room for improvement in this respect. Fifty-seven per cent. of the strength of the regiment are over 30 years of age.

Once again improvement was shown in musketry. Out of those exercised 83 per cent. were marksmen or first class shots.

The percentage of efficient volunteers has risen from 57.9 per cent. in 1923 to 82.1 per cent. in 1926, a most creditable achievement.

The school of instruction at Port Dickson was visited by 205 volunteers as compared with 183 in 1925.

The Easter Rifle Meeting at Kuala Lumpur attracted over 80 competitors from all over Malaya—a record for the meeting.

As regards the Malayan Volunteer Infantry all units were brought more directly under the control of the Commandant of the Federated Malay States Volunteer Force, and organisation was introduced whereby greater uniformity both as regards training and administration in these units was ensured. This must inevitably result in greater efficiency throughout.

The great advantages derived by the Selangor and Pahang Malayan Volunteer Infantry from the services of regular Sergeant-Major Instructors amply justified their appointment.

Arrangements were made to appoint similar instructors for the Perak and Negri Sembilan Malayan Volunteer Infantry.

The reforming of the Negri Sembilan Malayan Volunteer Infantry and its recruitment up to authorised establishment was a feature of the year.

Considerable progress towards war efficiency was made by all units. As examples the following instances may be cited. The efficiency figures for the Perak Malayan Volunteer Infantry rose from 58.2 per cent. in 1925 to 75.2 per cent. in 1926. One hundred and forty-three men of the Selangor Malayan Volunteer Infantry completed their musketry classification as compared with 118 in 1925. The strength of the Negri Sembilan Malayan Volunteer Infantry rose from 84 to 231 and in the Pahang Malayan Volunteer Infantry 115 were classified as efficient in drill as compared with 99 in 1925.

Efforts were concentrated on the further training of leaders with considerable success.

Lieutenant-Colonel W. R. Meredith, D.S.O., The Royal Inniskilling Fusiliers, arrived in the country on the 1st July and assumed the duties of Commandant of the Federated Malay States Volunteer Force.

Speaking generally the year was marked by consistent keenness and progress. The thanks of the Government are again due to the Rubber Growers Association, to the Federated Malay States Chamber of Mines, to the Press and to all other public and influential bodies which by their interest and encouragement did so much to help towards these results.

Finally the thanks of the Government are due to all ranks of the Federated Malay States Volunteer Force themselves for their valuable and self-sacrificing services.

Planters' Loans Board.

141. On 1st January, 1926, the Planters' Loans Board had outstanding as "Planters' Loans" to five companies ($221,000) and to 22 individuals ($410,478) the sum of $609,478. It lent only $106,000 (in seven loans) during the year. In the course of the year, 19 properties repaid their loans in full amounting to $305,728, while four properties made partial repayments amounting to $13,700.

At the end of the year, the loans outstanding were $288,500 to four companies and $124,800 to 11 individuals.

Under the "War Service Land Grants" Scheme (of which the figures and accounts are not included in the statements given above) 109 ex-soldiers were benefiting by approved loans amounting to $2,644,250, of which $1,734,438 had actually been paid out.

During the year, new loans amounting to $150,000 were approved, while 11 beneficiaries repaid their loans and one property was sold. At the end of the year, the total aggregate amount of the approved loans was $2,513,000.

Interest earned amounted to $129,995, of which $46,372 was in respect of planters' loans and $83,623 in respect of war service loans, while interest collected totalled $136,470. Of this sum, $76,103 was paid into Federal revenue and $60,367 to the revenue of the Board. The Board's profit on the year's working amounted to $27,774.

The general reserve fund stood at $525,000 at the end of the year and the special reserve fund (in connection with war service loans) at $50,000.

The Board operates upon a fund of $4,000,000 provided by "The Planters Loans Fund Enactment, 1915". The fund (which can be increased by a resolution of the Federal Council) was originally created expressly for loans for agricultural purposes but by an amending Enactment published on 30th April, 1926, loans can now be made, not only for agricultural purposes, but for any such other purposes as may, in the opinion of the Board, directly assist in the general development of the Federated Malay States.

NOTES ON THE RAINFALL RESULTING IN THE RECORD FLOODS.
PERIOD, 17TH TO 31ST DECEMBER, 1926.

Meteorological.

142. The rainfall had been considerably below the normal for the month of December until 17th when light rain occurred all over the Peninsula, heavy falls occurring only in the northern part of Kelantan, 7.56 inches being recorded at Kuala Kelantan.

Moderate rainfall was generally experienced on the 18th to 22nd except in Kinta, Batang Padang, Lenggong, and South Kedah where it was heavy.

The 23rd was a day of heavy rain, especially in Kelantan, Pahang and along the western side of the main range. The 24th and 25th were dry, except in Kelantan and Pahang where heavy rains continued.

The 26th to 29th inclusive will probably figure as the wettest four days of which there are any records. Heavy rain occurred all over the Peninsula, the 27th having the heaviest falls. At Kuantan 20 inches were recorded on that day, and 54 inches in the four days, 26th to 29th. At the Freda Mine in Kemaman 51 inches were recorded on the five days, 25th to 29th. Moderate rain was general on the 30th and light rain on the 31st. There are very few rainfall stations in Pahang, and it is unfortunate that in several cases the records were lost during the floods. The Sungei Lembing records and those from the Benta-Kuantan road were among the number lost.

The Kuantan-Kemaman district was the centre of the heaviest fall—70-75 inches fell in the period December 17th to 31st. At 30 miles inland it fell to 50 inches, and on the eastern side of and on the main range it was 25-30 inches. At the foot of the range on the western side it was 15-20 inches, and had decreased to seven inches by the time it reached the western coast.

In the Larut-Selama-Kulim district there was a fall of 20-25 inches.

Labour.

143. Returns of labour under section 82 of "The Labour Code, 1923," from 1,403 estates, including mines, showed 176,114 Madras Indians, 61,064 Chinese, 4,760 Javanese and 4,822 other nationalities. In addition, figures show 23,449 Madras Indians, 2,055 Chinese, 154 Javanese and 2,446 other nationalities employed by Government departments. The total returns from estates and Government departments combined thus show 199,563 Madras Indians, 63,119 Chinese, 4,914 Javanese and 7,268 other nationalities.

144. His Royal Highness Prince George visited the Federated Malay States early in the year, but his visit was entirely unofficial.

145. Sir George Maxwell, K.B.E., C.M.G., Chief Secretary to Government, retired early in May on reaching the age limit, and was succeeded by Mr. W. Peel, C.M.G.

146. The devolution policy was under consideration during the year, and reports on the financial aspect, the reconstitution of the Federal Council, and possible extension of the legislative powers of the State Councils, were submitted to the High Commissioner by Committees appointed for that purpose. The final report on the financial aspect was unanimously adopted by Federal Council at the meeting held in December. The report on the Reconstitution of the Federal Council was laid on the table at the same meeting, and was finally adopted early in 1927.

WILLIAM PEEL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
5th May, 1927.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	[illegible],553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	[illegible],056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.
* As now corrected. ‖ Excluding bullion and specie.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,365,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	161,188	11,193,115	5,389,042	21,640,545	1,476,032	1926

‖ Excluding bullion and specie. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. † The figures for previous years included items now omitted owing to reclassification of revenue.

Appendix B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1926.

Dr. | *Cr.*

Dr.	$ c.	$ c.	$ c.	Cr.	$ c.
To Loan Expenses—				**By Loan Subscriptions—**	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamps, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	20,395,572 65				
Posts and Telegraphs Department	1,566,693 44				
Topographical Survey Department	779,023 08				
Topographical Survey of Forest Reserves ...	67,063 83				
Railway—Open Lines	2,574,503 30				
„ Construction	30,263,800 16		55,646,656 46		
To Balance ...	...	...	18,650,893 14		
			$80,185,714 29		$80,185,714 29

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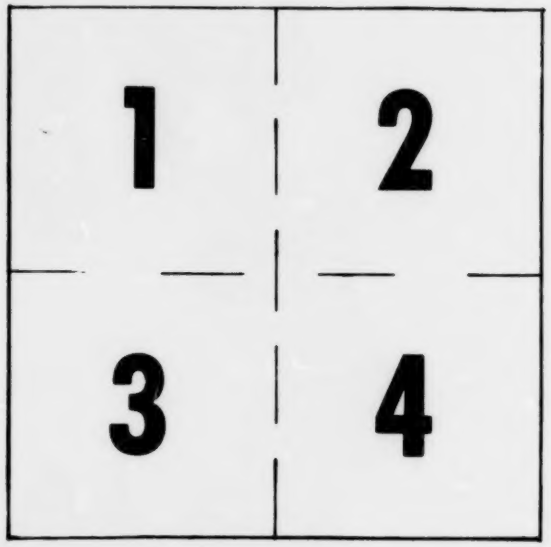
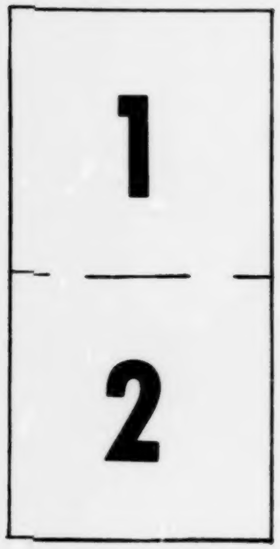
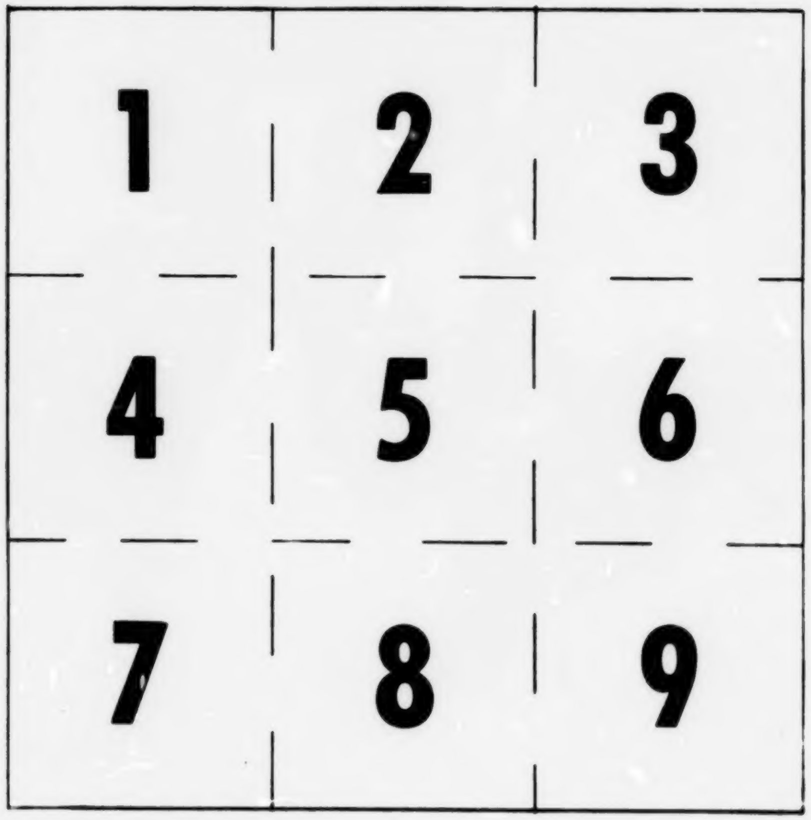
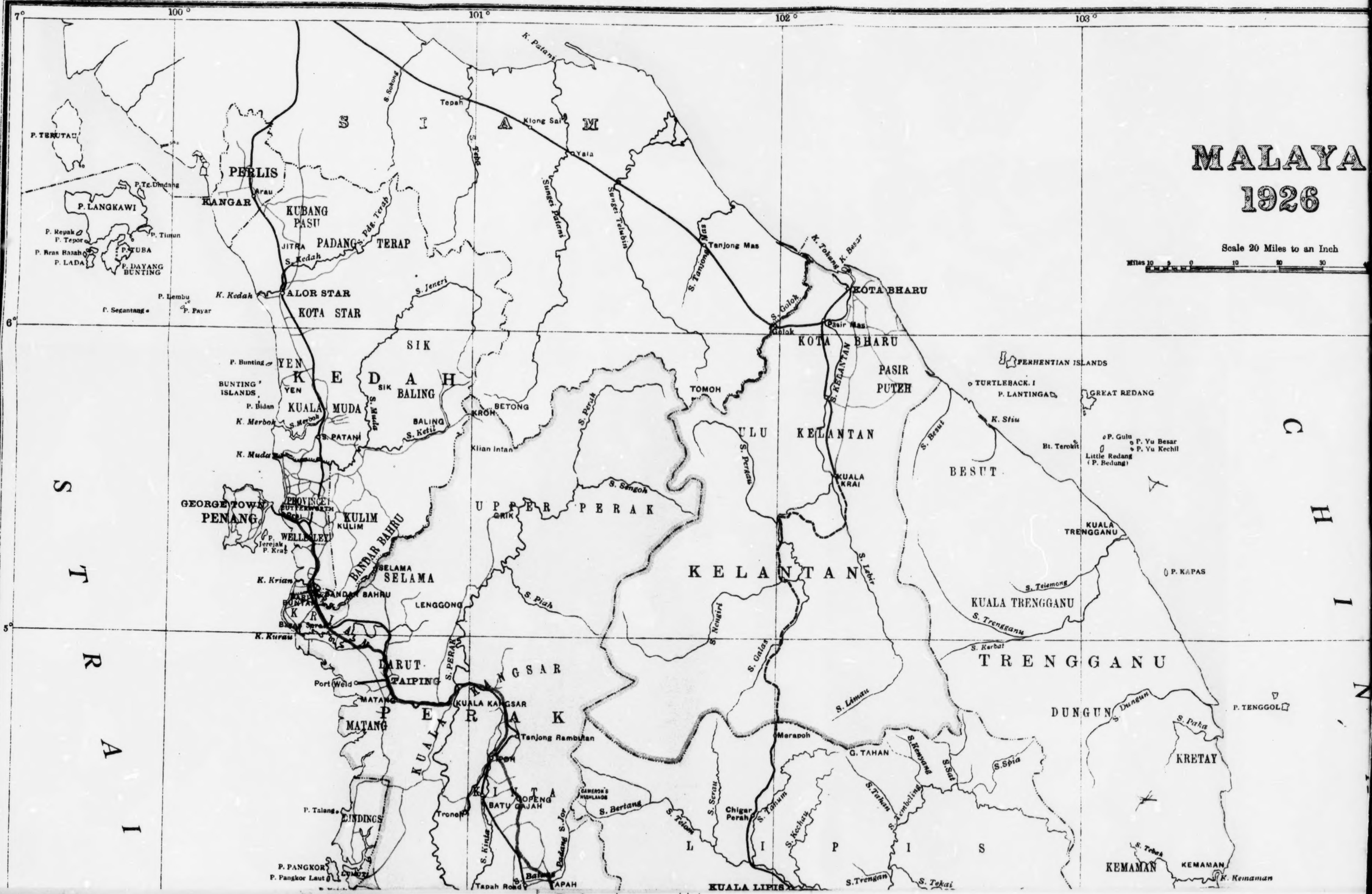
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.









MALAYA
1926

Scale 20 Miles to an Inch

Miles 10 5 0 10 20 30
7°
100°
101°
102°
103°
6°
5°
S I A M
P. TERUTAU
PERLIS
KANGAR
Arau
P. Tg. Dindang
P. LANGKAWI
P. Repak
P. Tepor
P. Timun
P. Bras Basah
P. TUBA
P. LADA
P. DAYANG BUNTING
KUBANG PASU
JITRA
PADANG TERAP
S. Pdg. Terap
S. Kedah
K. Kedah
ALOR STAR
KOTA STAR
P. Lembu
P. Segantang
P. Payar
S. Sobong
Tepah
Klong Sai
Yala
Sungei Patani
Sungei Telubin
K. Patani
S. Tanjong Mas
Tanjong Mas
K. Tebang
K. Besar
KOTA BHARU
S. Golok
Golok
Pasir Mas
KOTA BHARU
PASIR PUTEH
S. Teba
S. Jeneri
SIK
P. Bunting
YEN
K E D A H
BUNTING ISLANDS
YEN
SIK
BALING
P. Bidan
KUALA MUDA
S. Muda
K. Merbok
S. Merbok
S. PATANI
BALING
S. Ketil
KROH
BETONG
Klian Intan
K. Muda
TOMOH
ULU KELANTAN
S. KELANTAN
S. Perak
S. Pergau
KUALA KRAI
PERHENTIAN ISLANDS
TURTLEBACK. I
P. LANTINGA
GREAT REDANG
K. Stiu
S. Besut
BESUT
P. Gulu
P. Yu Besar
P. Yu Kechil
Bt. Terokit
Little Redang (P. Bedung)
C H I N A
S T R A I
GEORGE TOWN
PENANG
PROVINCE WELLESLEY
BUTTERWORTH
KULIM
KULIM
Jerejak
P. Kra
BANDAR BAHRU
S. Sengoh
UPPER PERAK
GRIK
KUALA TRENGGANU
S. Lebir
P. KAPAS
SELAMA
SELAMA
K. Krian
BANDAR BAHRU
K R I A N
LENGGONG
K E L A N T A N
S. Piah
S. Telemong
KUALA TRENGGANU
S. Trengganu
S. Nenggiri
K. Kurau
S. Karbat
TRENGGANU
DARUT
TAIPING
S. PERAK
Port Weld
K A N G S A R
S. Galas
MATANG
MATANG
KUALA KANGSAR
S. Limau
DUNGUN
S. Dungun
P. TENGGOL
P E R A K
Tanjong Rambutan
Merapoh
G. TAHAN
S. Kenyang
S. Sat
S. Paka
KRETAY
IPOH
KUALA KANGSAR
K I N T A
GOPENG
CAMERON'S HIGHLANDS
S. Spia
S. Tahan
S. Tembeling
P. Talang
DINDINGS
Tronoh
BATU GAJAH
S. Bertang
S. Telom
S. Serau
Chigar Perah
S. Tanum
S. Kechau
S. Kinta
S. Jor
Padang
L I P I S
P. PANGKOR
P. Pangkor Laut
Lumut
Tapah Road
Batang
TAPAH
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S. Trengan
S. Tekai
S. Tebak
KEMAMAN
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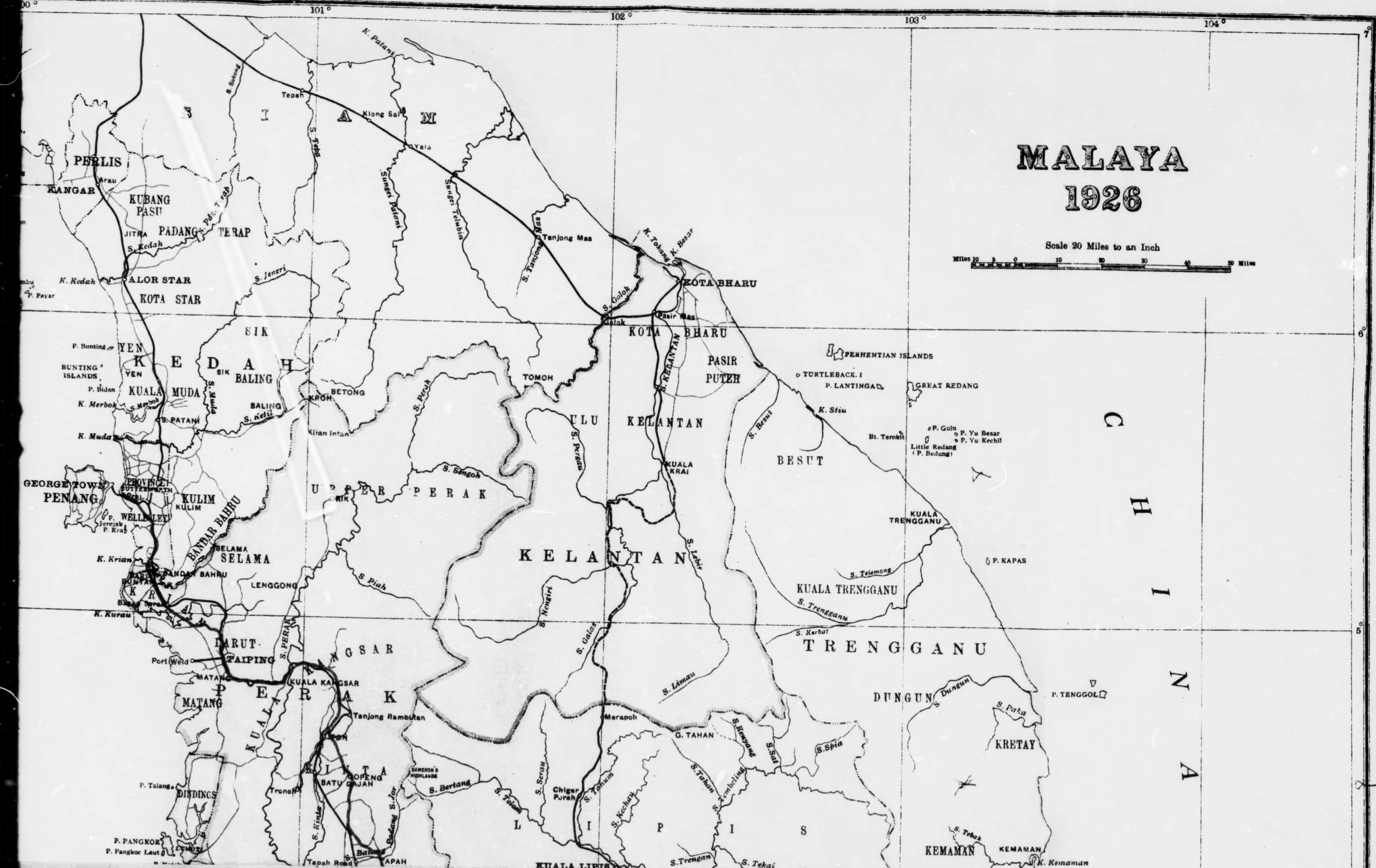

MALAYA 1926

Scale 20 Miles to an Inch

101°
102°
103°
104°
7°
6°
5°
Miles 10 5 0 10 20 30 40 50 Miles
S I A M
K. Patani
S. Sokong
Tepah
Klong Sai
Yala
S. Telg
Sungei Patani
Sungei Telubin
Tanjong Mas
S. Tanjong Mas
K. Tabang
K. Besar
KOTA BHARU
S. Golok
Golok
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P. Krai
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K. Krian
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LARUT
TAIPING
Port Weld
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UPPER PERAK
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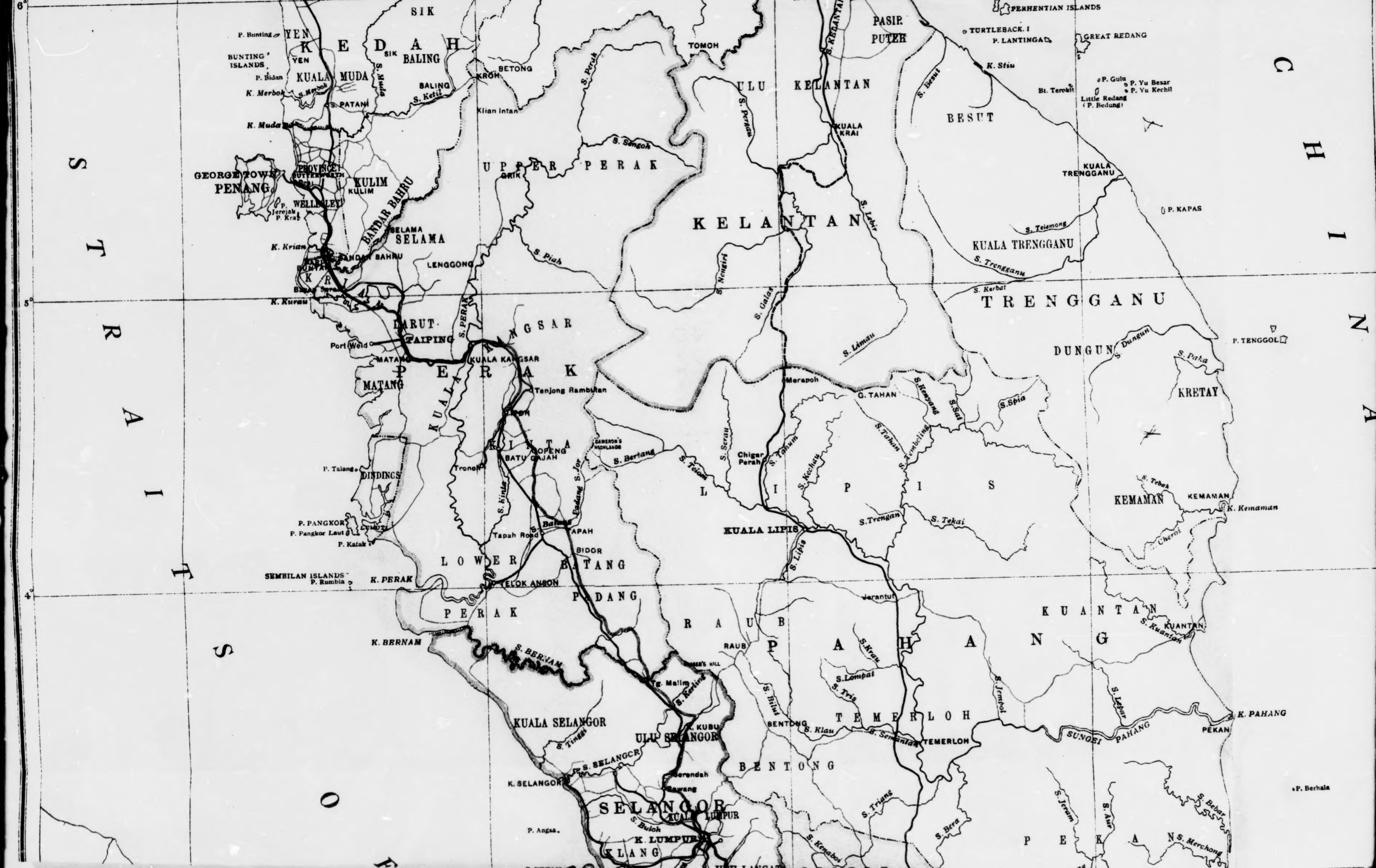
6°
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P. Bidan
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S. Merbok
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S. Jor
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P. Pangkor Laut
LUMUT
P. Katak
S. Trengan
S. Tekai
KUALA LIPIS
S. Cheroi
BIDOR
LOWER
BATANG
PADANG
SEMBILAN ISLANDS
P. Rumbia
K. PERAK
TELOK ANSON
S. Lipis
Jerantut
KUANTAN
KUANTAN
S. Kuantan
PERAK
RAUB
RAUB
PAHANG
K. BERNAM
S. BERNAM
S. Krau
S. Lompat
S. Triang
FRASER'S HILL
Tg. Malim
S. Kerling
S. Bilut
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S. Jempol
S. Lepar
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BENTONG
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S. Semantan
TEMERLOH
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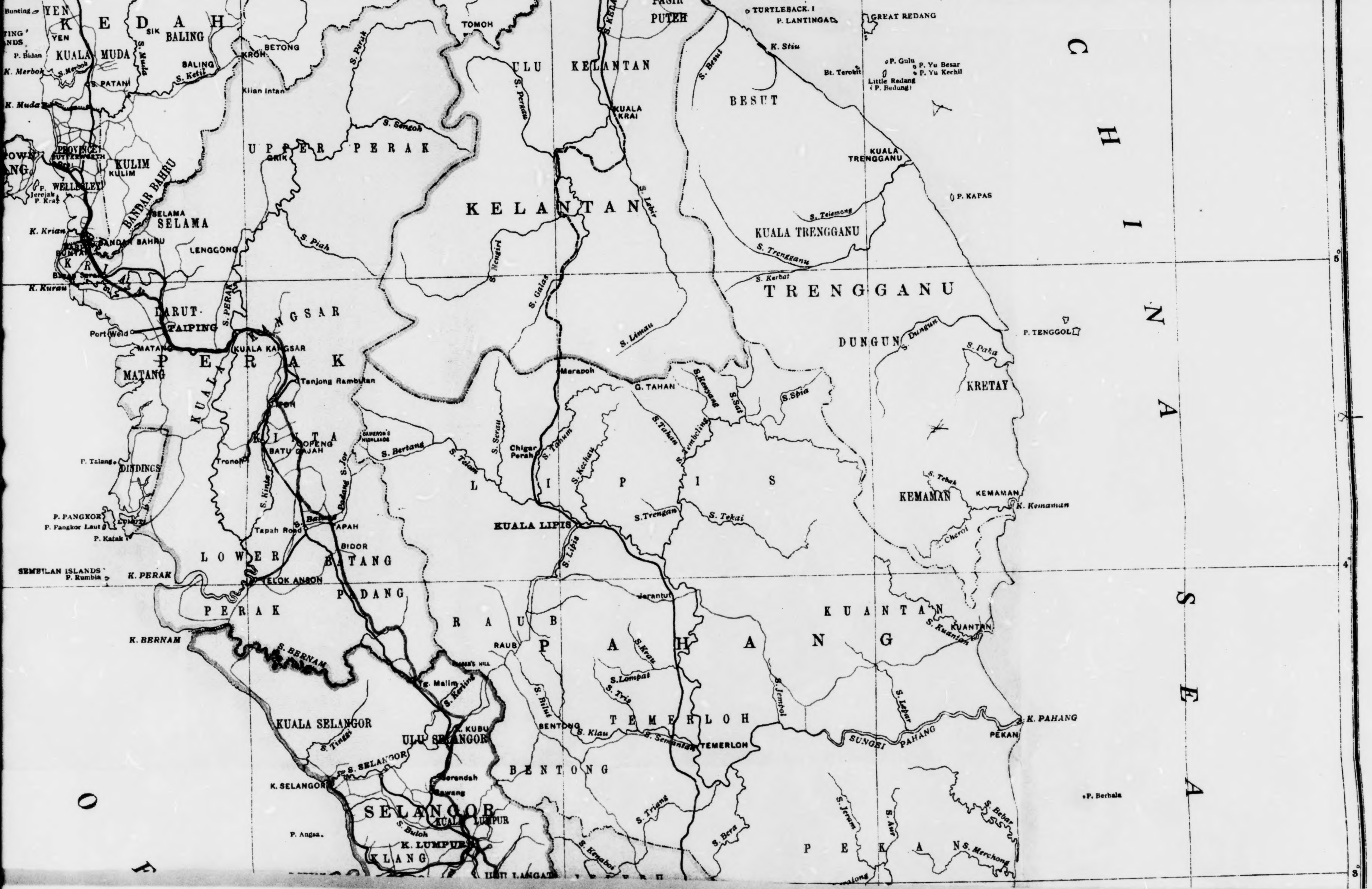
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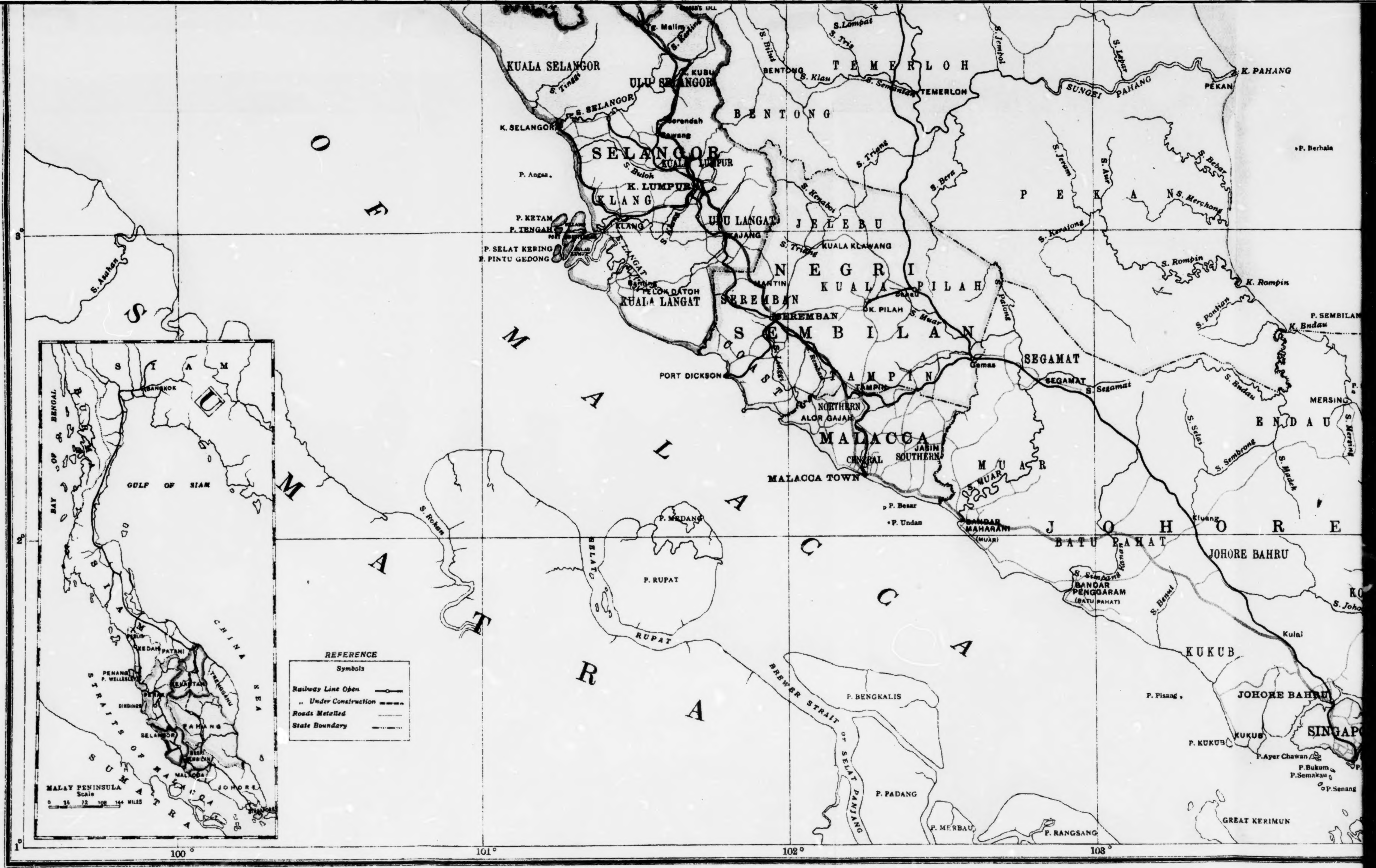

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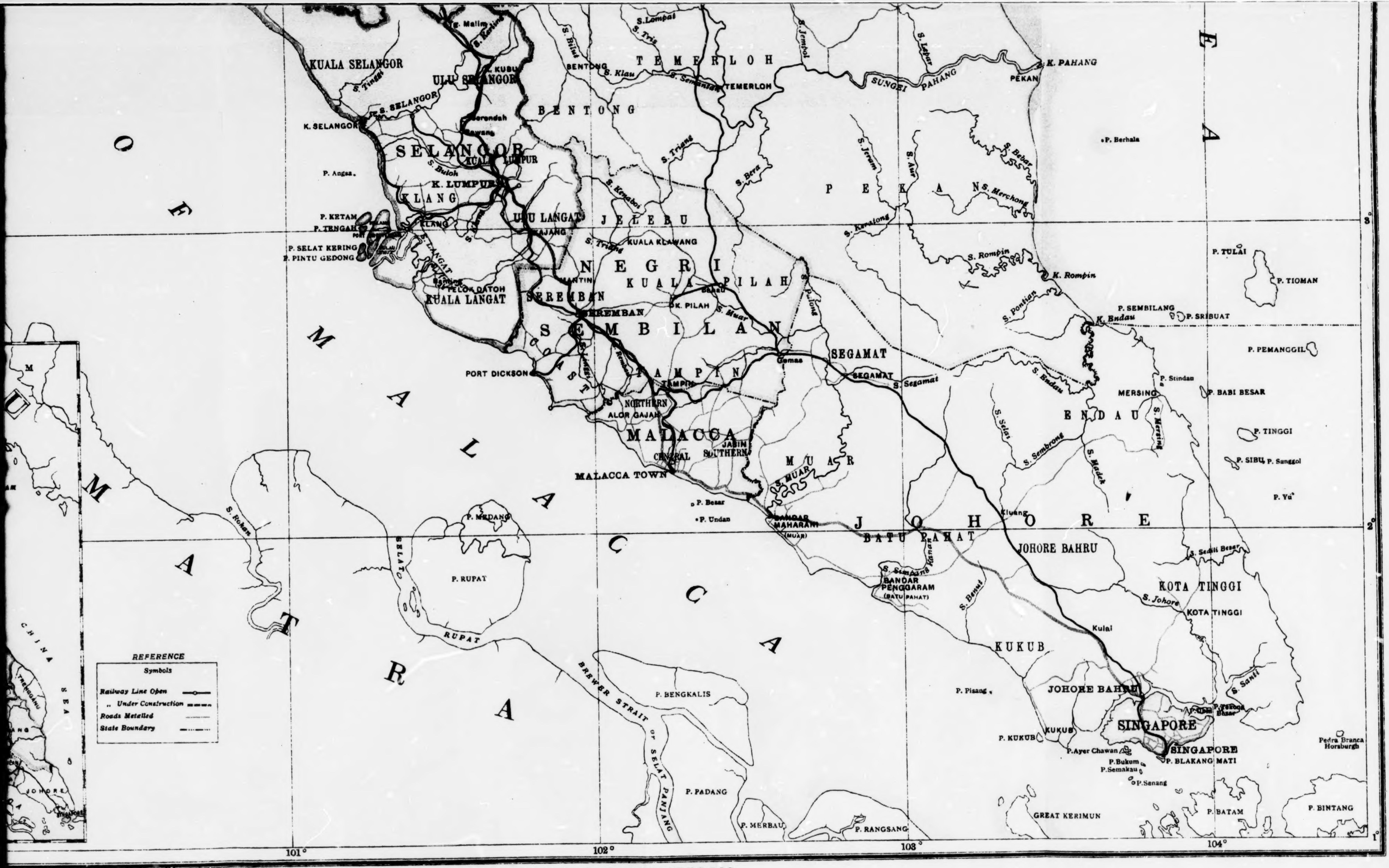
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State Boundary

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Report for 1927.

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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1927.

PREFACE.

HISTORY.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Idris.

SELANGOR.

In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

Constitution of the States.

The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

The Federation.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, one Official Member nominated by the High Commissioner, and eleven Unofficial Members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

GEOGRAPHY.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

Selangor (3,156 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

CLIMATE.

The temperature of the West Coast of the Malay Peninsula has but small daily range and little appreciable variation. On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. Records from the typical stations on the West of the Peninsula, where the South-West Monsoon is broken by Sumatra, show a decrease of rainfall from May to August. At Kuala Lipis on the east of the main range, there is a general rise of rainfall from February until May, succeeded in some years by a distinct drop in July and August; there is a further rise culminating in October and November followed by a fall to moderate rainfall in December and January. Charts, however, cannot bring out two points: the brilliant sunshine, which is the rule during the morning, and the dry spells of a fortnight or more, when the grass becomes parched. In the mountains the rainfall is comparatively high, particularly in the Larut Hills above Taiping where the average at "The Cottage" (Maxwell's Hill) (4,513 feet) for the years 1904-1927 was 250 inches. This station is however very exceptional, as the mean for other hill stations of approximately the same altitude is: Fraser's Hill (4,289 feet) 119 inches, Cameron's Highlands (4,650 feet) 122 inches.

The district of Jelebu, which is shielded from the influence of both North-East and South-West Monsoons, is by far the driest and has an average rainfall in the years 1891-1927 of 64 inches.

On the West Coast of the Peninsula the coastal stations are the driest, the average rainfall being about 84 inches. This gradually increases landwards, and the stations close to the foot of the main range of mountains show an average fall of about 115 inches. The opposite is true of the eastern side of the Peninsula where the coast stations show a mean of about 122 inches, due entirely to the heavy falls experienced during North-East Monsoon; and the inland stations show a mean of about 94 inches.

Negri Sembilan, owing to the absence of high mountains, has the lowest rainfall of the States of the Federation, the average of the seven stations being only 80 inches.

The heat, owing to the moisture of the atmosphere, is at times oppressive, although 100 has never been recorded in the shade. The nights are cool. On the highest mountains the temperature has been known to fall at night to 42° Fahrenheit.

In the day time, there is almost always a breeze to modify the heat. The Peninsula lies within the region of the South-West and North-East Monsoons, but, owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which strikes the East Coast from across the China Sea. Violent squalls, known as "Sumatras", are not infrequent on the West Coast of the Peninsula between April and September. Generally they are of short duration, occur during the night, and may be accompanied by severe thunderstorms.

HILL STATIONS.

CAMERON'S HIGHLANDS.

The development of Cameron's Highlands as a hill station was definitely commenced. The construction of the road from Tapah was continued and opened to the 15th mile and plans were prepared for the remainder of the road.

The Committee appointed for the development of the Highlands met on four occasions.

Mules were imported from Burma in November for the purposes of transport.

A Company of the Burma Rifles was detailed for clearing operations and altogether cleared about 100 acres of jungle.

Transport to the Highlands to facilitate construction is provided by a contract with a local contractor and the strictest medical supervision prevails over the labour force engaged upon road-making operations.

The telephone was extended to the 19th mile and agricultural experiments were in hand at Tana Rata.

A contract, to be completed in three years, was let to a European firm in Singapore for the construction of the road from the 15th mile at schedule rates.

FRASER'S HILL.

The road to Fraser's Hill from the Gap was commenced in the year 1920 and completed in 1922.

The Government has, at present, at this station 14 bungalows which are intended primarily for the use of Government officers but which are available for others if there is a vacancy.

Two additional Government bungalows are to be constructed, but generally speaking further building must be left to private enterprise.

From Red Cross funds four houses have been completed and are in occupation. Two are primarily for the use of ex-service men and women, and for the others applications supported by medical certificates receive priority.

Ten private houses have been completed and work is in hand on three other buildings.

Six sites were allotted to applicants during the year.

The water supply system is completed, with the exception of certain treatment works, and sanitary installations have been constructed at a number of the bungalows.

The golf links was opened in 1927.

GUNONG ANGSI.

This is a small hill station containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

GUNONG TAHAN.

The establishment of a hill station at Gunong Tahan was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The wettest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76°F. on three occasions, and the lowest minimum temperature 48°F. There appears to be no record of investigations into the area available for the residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

KLEDANG.

This hill is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

PRINCIPAL LANGUAGES.

The principal languages spoken are English, Malay, Tamil and Chinese. The lingua franca is Malay.

CURRENCY.

The unit of currency is the silver dollar which is divided into 100 cents. The value of the dollar is fixed at present at two shillings and four pence. Subsidiary silver coins are those of value 50 cents, 20 cents, 10 cents and 5 cents. There is also a nickel 5-cent coin and copper or mixed metal coins of 1 cent denomination.

WEIGHTS AND MEASURES.

English, Malay and Chinese weights and measures are used. A pikul (equivalent to 133⅓ lbs.) is sub-divided in 100 katties of 16 tahils each. A koyan consists of 40 pikuls and is equivalent to 5,333⅓ lbs. avoirdupois. A gantang is the equivalent of one gallon and a chupak is equal to a quart.

Chinese equivalents to a tahil, a kati, a pikul and a koyan are a leong, a kan, a tam and si sap tam, respectively. Chinese equivalents to a chupak and a gantang are a chup put and a tang, respectively.

ANNUAL REPORT, 1927.

I.—GENERAL.

Constitutional changes.

A most important change was made in the constitution of the Federation. On the 24th April, 1927, an Agreement for the re-constitution of the Federal Council was entered into between the High Commissioner on behalf of the Government of His Majesty the King, Emperor of India, and the Rulers of the Federated Malay States. The most important effect of this Agreement was the voluntary withdrawal from the Federal Council of Their Highnesses the Rulers. Their Highnesses had long felt the existing situation to be in many respects unsatisfactory and their position in the Council somewhat anomalous. They were in entire and unanimous agreement with the change. As His Highness the Sultan of Perak himself stated in Council, it was felt that the step taken would lead to closer co-operation between the Rulers and their Residents and to a further measure of responsibility for the State Councils.

It was decided to hold a Durbar at least once a year in one or other of the States for the purpose of discussing matters of interest, more especially those of interest to the Malays. The Durbar proceedings will usually be held "in camera" and will be attended only by the High Commissioner, the Rulers, the Chief Secretary and the Residents. The first Durbar was held at Kuala Kangsar in August, when useful discussions took place.

The Agreement provided for the appointment to the Federal Council of three additional Malay Unofficial Members and of the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, together with one other official to be appointed by name and not by office.

A further important change provided for by the Agreement was the devolution to the State Councils of certain financial powers, whilst reserving to the Federal Council ultimate control of the financial resources of the Federation. Certain services described as "Reserved (State) Services" were placed under the control of the State Councils subject to the voting of certain lump sums by the Federal Council to cover the total amounts required by the respective States. Within the limits of such total votes the State Councils will have control over such reserved services. There are services specially and definitely reserved as Federal Services but between these two categories come certain services described as "Unreserved" which are partly Federal and partly State. If the system now adopted proves a success, and the control by the State Councils is found to be satisfactory, it is proposed gradually to transfer in part some of these Unreserved Services to the Reserved (State) Services.

These proposals were passed unanimously in Federal Council, Their Highnesses the Rulers being then present as Members. They constitute a substantial measure of constitutional reform which, it is believed, will make for more efficient administration and will, at the same time, go far to satisfy the legitimate aspirations of the Rulers.

Floods.

The effects of the abnormal floods referred to in the Annual Report for the year 1926 were very considerable, and the restoration necessitated thereby involved a large expenditure of time and money, especially by the Railway and the Public Works Departments. The question of relief was a very important one, and a special Commissioner—a member of the Malayan Civil Service—was appointed to go through the affected districts in Pahang with a view to organising the necessary relief out of the funds which were publicly subscribed, as well as the additional relief which Government readily gave. The loss of live stock, including buffaloes, was very considerable, and has as yet only partially been made good. The damage to the land, while very serious, proved to be rather less than was anticipated.

The States affected owe a large debt of gratitude to those who subscribed so generously to the public relief funds, to the Colony who helped so readily during the time of stress, and to the State of Kedah which made a present of buffaloes to the value of $10,000 to replace some of those destroyed in Pahang. This readiness on the part of the various administrations and communities to render assistance in time of trouble affords remarkable evidence of the harmonious relations which exist in Malaya.

The effects of these floods further impressed on Government the necessity of taking early action with regard to the restoration and improvement of the rivers. A scheme was drawn up and received the general approval of the Federal Council. Representations, however, were made that considerable economy might be effected and great benefits secured both to the Government and the miners if a scheme could be evolved under which selected new river beds could be dredged for tin by the miners themselves and then taken over by Government to provide for the diversion of existing rivers. The old river beds could then be handed over for mining. A Commission was appointed in November to consider this question and make recommendations. Its deliberations had not been completed at the close of the year.

II.—FINANCE.

Budget for 1927.

The estimates of revenue and expenditure for the year 1927 provided for a revenue of $97,809,543, and an expenditure (excluding Railway capital expenditure and other expenditure on public works provided for out of loan moneys) of $94,079,390.

Actual revenue and expenditure.

The actual revenue for the year was $105,404,458 and the expenditure was $93,263,915. Thus the surplus was $12,140,543 against an estimated surplus of $3,730,153.

The principal excesses in revenue as compared with the estimate were:

$2,055,515	under	Railways;
1,328,576	,,	Customs;
1,311,089	,,	Fees of Court;
1,083,773	,,	Land Sales;
819,772	,,	Interest;
615,440	,,	Licences;
349,003	,,	Forests;
303,430	,,	Municipal.

The Excise revenue was short of the estimate by $936,662.

The total gross savings in expenditure amounted to $5,760,114, the largest items being:

Public Works Extraordinary	$2,613,616
Public Debt Charges	1,143,893
Education	485,102
Surveys	223,140
Police	168,445
Medical	164,503
Civil Service	154,438
Agricultural	111,842
Clerical Service	111,566

The apparent reduction under Public Debt Charges is merely due to the non-investment of the Supplementary Sinking Fund contribution of $1,143,858 until January, 1928.

Excesses over estimated expenditure totalled $4,944,639, the largest items being:

Railways (Revenue Account)	$2,379,247
Miscellaneous Services	1,532,039
Purchase of Land	462,469
Military	317,844

The excess under the head of Miscellaneous Services included $645,863 for the purchase and equipment of premises in London for the Malay States Information Agency, a contribution to the Rubber Growers' Association of $347,659 for propaganda and $148,118 for relief and compensation in connection with the floods at the end of 1926.

The excess under Railways (Revenue Account) was caused by the transfer of the sum of $3,606,012 to a Railway Renewals Reserve, while that under the head of Military was due to payment to India in 1927 of arrears of charges dating back to 1922 on account of the Training Battalion of the Burma Rifles.

Public debt.

The public debt remained as on the 31st December, 1926, viz., $80,185,714, and consists of the Straits Settlements Sterling Loan of £9,335,000. The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) was issued in May, 1922, at 95, bearing interest at 4½ per cent.

The Sinking Funds, contributions to which commenced in 1925, amounted to $5,126,923 (exclusive of the sum of $1,143,858 due but not paid until 1928).

Assets and liabilities.

The following statement shows the assets and liabilities on the 31st December, 1927:

		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		11,015,690	19
Sundry Outstanding Accounts		26,424	12
Due to India		157,409	18
Ceylon Agency Account ...		29,760	76
Family Remittances		5,644	41
Straits Settlements Government War Service Land Grant Scheme		5,795	59
Deposits—			
Courts	$217,177.79		
Forests	315,008.53		
Lands	1,057,960.26		
Postal	280,204.83		
Miscellaneous ...	3,100,959.06		
		4,971,310	47
Railway Renewals Reserve ...		3,606,011	96
Sundry Funds—			
Bailey Fund	$ 900.00		
Police Fine and Reward Fund	28,908.61		
Public Officers' Guarantee Fund	250,762.35		
Red Cross Fund...	3,320.73		
Victoria Institution Building Fund	95,709.91		
Composition Stamp Duty Fund	295,625.65		
Miscellaneous ...	36,714.68		
		711,941	93
War Savings Certificates, 1924-1927...		340	00
Singapore Naval Base Contribution Account		11,245,714	28
Opium Revenue—Replacement Reserve Fund		15,503,998	01
Inter-Treasury Accounts ...		513	43
Suspense		70,500	25
Capital Fund—Bagan Serai Rice Mill		382,429	73
Capital Fund—Kuala Kurau Rice Mill		250,000	00
Capital Fund—F. M. S. Government Factory		400,000	00
Surplus—			
Reserved for Railway Capital Expenditure and Public Works Special Services...	$72,459,759.00		
Balance unallocated	23,768,884.93		
		96,228,643	93
		144,612,128	24

		$	c.
Cash in Treasuries and Banks as per distribution statement		9,610,252	05
Cash with Agencies—			
Crown Agents	$ 25,489.07		
F.M.S. & S.S. Joint a/c., India ..	34,343.07		
Malay States Information Agency	24,059.87		
Penang Agency	39,777.17		
Singapore Agency	497,505.69		
		621,174	87
Cash in Transit		615,060	96
Fixed Deposits		14,750,000	00
Advances at call and other temporary investments by Crown Agents		17,511,428	52
Investments (Surplus Funds)—			
S.S. Municipal Debentures (at cost)	$ 7,100.00		
Sterling Securities	24,128,295.94		
Perak River Hydro-Electric Power Co. Ltd.	3,000,000.00		
	27,135,395.94		
Less Redemption Reserve	26,702.96		
		27,108,692	98
Investments—Singapore Naval Base Contribution Account		11,245,714	28
Investments—Opium Revenue—Replacement Reserve Fund		15,061,498	01
Investments (Specific Funds) (at cost)—			
Bailey Fund	$ 900.00		
Police Fine and Reward Fund ...	25,406.75		
Public Officers' Guarantee Fund	208,374.77		
V. I. Building Fund	94,809.91		
Security Deposits Account ...	50,991.68		
Composition Stamp Duty Fund, 4½ per cent. Loan with Crown Agents	295,625.65		
		676,108	76
Family Remittances		1,068	90
Due by other Governments—			
Ceylon	$ 351.46		
Crown Agents	1,482.77		
India	13,140.36		
Johore	30,033.99		
Kedah	697.81		
Kelantan	10,525.85		
Singapore	21,892.40		
Trengganu	6,398.97		
		84,523	61
Sundry Outstanding Accounts		15,017	49
Loans—			
Siamese Government (*b*) ...	$35,882,570.02		
Brunei Government	407,000.00		
Perlis Government	100,000.00		
Planters	732,165.01		
War Service Land Grant Scheme	2,028,798.00		
Miscellaneous...	1,529,458.51		
		40,679,991	54
Advances		1,220,343	31
Imprests		168,857	65
Bentong Tailings Retention Scheme ...		134,210	90
Stores and Materials Account, Railways		2,089,365	28
,, ,, ,, Post Office ...		1,332,447	88
,, ,, ,, P.W.D. ..		99,715	24
,, ,, ,, Electrical Board		166,997	89
,, ,, ,, Marine Slipway...		45,400	43
Marine Slipway Account		17,142	73
Furniture making Account, Forest Department		4,912	18
Timber Account—Forest Department		260,235	71
Minor Forest Produce Account—Forest Department		12,622	36
Suspense		46,914	98
Bagan Serai Rice Mill		382,429	73
Kuala Kurau Rice Mill		250,000	00
F.M.S. Government Factory		400,000	00
		144,612,128	24

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

The Loan to Siam.

The Loan to the Siamese Government of £4,630,000 ($39,685,714), which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $35,882,570 on the 31st December, 1927, having been reduced by the payment of the fourth instalment due on 1st January, 1927. As this loan is being repaid by equal yearly payments to include both principal and interest, the principal part of the instalments will steadily increase.

Loans to Perlis and Brunei.

The loans to Perlis and Brunei, which stood at $150,000 and $410,500, respectively, on 31st December, 1926, have been reduced to $100,000 and $407,000, respectively, by the payment of the annual instalments due in 1927.

Surplus.

The surplus on 31st December, 1926, was $84,088,101. As the revenue for the year exceeded the expenditure by $12,140,543, the surplus was increased to $96,228,644 on 31st December, 1927, of which a sum of $72,459,759 has been reserved for Railway capital expenditure and public works, leaving a balance of $23,768,885 unallocated at the end of the year.

The liquid assets, comprising cash, advances at call, fixed deposits and easily realisable investments, amounted to $67,216,609 at the end of the year as compared with $60,272,171 at the beginning. This does not take into consideration the investments earmarked for certain specific funds.

Singapore Naval Base.

To meet payments of the contribution of £2,000,000 towards the cost of the Singapore Naval Base, investments worth £2,000,000 were set aside in 1926 to form a special fund. Up to the 31st December, 1927, payments amounting in all to £688,000 had been made to the Admiralty, War Office and Air Ministry, leaving a balance on the fund of £1,312,000.

Opium Revenue Replacement Reserve Fund.

The Opium Revenue Replacement Reserve Fund stood at $15,503,998 on the 31st December, 1927, of which $15,061,498 was represented by investments and the balance by cash awaiting investment. This fund was started with $10,000,000, provided out of revenue in 1925 to which has been added 15 per cent. of the annual revenue from chandu sales together with the accumulated interest. The contribution from 1927 revenue was $2,242,500.

Railway Renewals Reserve Fund.

A Railway Renewals Reserve Fund has been started for the purpose of meeting the depreciation of wasting assets belonging to the Railway Department and for equalising the incidence of the cost of their replacement. The fund was opened by the transfer of the surplus amounting to $3,606,012 of Railway revenue over revenue expenditure during 1927.

Sterling loan capital account.

A statement of the sterling loan capital account is published as appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on railway and other works up to the 31st December, 1927, accounted for $63,281,859, leaving a balance of $11,015,690 still available to meet capital expenditure during 1928.

III.—PRODUCTION.

AGRICULTURE.

The higher establishment of the Department of Agriculture, excluding the Secretary for Agriculture who is not a technical officer, comprises 38 European officers, 26 on the Research Staff and 12 on the Field Staff, the latter including three officers in the Colony and one in Johore. Three new officers appointed during the year brought the Field Staff to full strength, though it still includes one temporary officer. The substantive appointments of two Assistant Entomologists, one Superintendent of Government Plantations and one Research Student were not filled during the year.

Rubber.

General.—As was anticipated in the report for 1926, most of the work connected with rubber was transferred from the Department of Agriculture to the Rubber Research Institute. It was, however, decided that the Field Division of the department should retain all legal powers under the Agricultural Pests Enactment and, in consequence, should remain responsible for ensuring the control of pests and diseases of rubber.

Rubber Research Work.—There were, however, two minor exceptions to this policy. In the first half of the year some outstanding chemical investigations on Hevea latex were brought to a stage at which the results then obtained could be published. Moreover, the Mycological Division continued a general study, which has been in progress for some time, of certain Malayan species of the genera Pythium and Phytophthora, in order to determine their relationships to the similar species responsible for well-known diseases of major crops throughout the tropics. This work necessarily includes an investigation of certain species of these fungi responsible for such well-known diseases of Hevea as black stripe, patch canker, pod rot and leaf-fall.

Diseases.—The severe floods at the end of 1926 and the beginning of 1927 were directly responsible for the destruction of a number of rubber trees along the river banks and in low-lying situations. They also rendered many others susceptible to the attacks of such diseases as "Dry Rot" and "Patch Canker", since the fungi causing them readily penetrated into bark already damaged by being submerged for several days.

"Pink Disease" (*Corticium Salmonicolor*) was not much in evidence and was kept under adequate control in those areas where it is endemic. Certain virulent outbreaks of "Mouldy Rot" (*Sphaeronema fimbriatum*) during wet weather required close attention to ensure adequate treatment. This disease spread in a few localities, but on the whole there has been no great increase in the area affected.

Padi.

General.—Owing to extensive damage by floods, combined with the loss of grain occasioned by a wet harvest in the Krian irrigation area, the padi crop reaped in 1927 was small. Only 68 per cent. of an average crop was obtained in Krian, while the total crop in the Federated States was estimated at about 21½ million gantangs from approximately 160,000 acres. On account of this shortage of crop, a good price was obtained for such local supplies of padi as were available.

So completely were the crops destroyed by floods in some localities that it became necessary to distribute over 95,000 gantangs of seed padi for the 1927-28 season, the greater part of the supply being required along the Pahang and Perak rivers. Later in the year drought delayed planting in many districts, and in consequence crop prospects vary greatly. On the whole, however, if the weather is dry during harvest, an average crop is expected. It is interesting to record that the detritus deposited by the floods in Pahang proved very suitable for the growth of wet padi and led to yields much in excess of the average in several localities.

Experimental Investigations.—Unfortunately the conditions prevailing during the 1926-27 season seriously interrupted the records of all padi experiments in progress. The growing plants were entirely destroyed at the Talang, Bota and Dong Test Stations and those at the Kajang Station were severely damaged, while such data as it was possible to obtain at the Titi Serong Padi Experiment Station were of little value for computing results.

Further evidence of the wide distribution of seed of selected strains was gained by visits to several padi areas during and after harvest, and by examining exhibits at various Agricultural Shows, at which it was observed that the selected strains took numerous prizes.

In view of the reliance of Malaya on imported supplies of rice it is desirable to obtain information on the possibilities of storing rice and padi, in order to tide over any temporary embarrassment. For this purpose an experimental rice store has been erected and experiments will be commenced in the coming year.

Pests.—The rat campaign was continued in Krian throughout 1927. As a result 842,791 rats were destroyed as compared with 673,102 in the previous year. In early December some damage from these pests was found and in consequence balls of poisoned bait were prepared and distributed at the rate of 1,000 balls a day. This effectively checked any further damage.

The Delphacid insect (*Sogata pallescens*) which did considerable damage to padi in 1925, again appeared in various places in December, but disappeared after two weeks. In Krian it was successfully controlled by draining off the irrigation water and replacing it with fresh water. The effect of this pest on the crop is likely to be slight, as the padi was attacked when young and had sufficient time to recover before harvest.

Coconuts.

General.—During January the Singapore price for copra rose from $10.10 to $11.00 per picul. It subsequently varied little until October, when it rose to $11.53 per picul, declining again at the end of the year to $11.50 per picul. The average price throughout the year was $11.17 as compared with $11.80 per picul in 1926.

The feature of the year has been the marked decrease in copra production. It is considered probable that the drought in 1926 accounts for this. In general the copra content of nuts has been low, while in particular districts fewer nuts have been harvested.

Experimental Investigations.—Continued studies show that individual palms vary widely from one another not only in their average annual yields of nuts, but also in the average copra content of those nuts. Thus annual yield and average copra content of nuts have both to be ascertained in order to select the individual palms giving the highest annual production of copra. These results emphasise the utility at the present time of selecting seed nuts from palms known to give high yields of copra, and also indicate the valuable increase in copra production per acre that may ultimately be obtained by selection.

The Coconut Experiment Station, Klang, is now fully planted with selected types of trees. A series of experiments on manuring, cultivation and the use of cover and catch crops has been commenced.

The reputed inferiority of Straits copra as compared with that produced in Malabar or Ceylon is being made the subject of a chemical investigation. It is believed that climatic conditions are not wholly responsible and it is hoped that an improved reputation may eventually be established.

Diseases and Pests.—The Black Coconut Beetle (*Oryctes rhinoceros*) and the Red Stripe Weevil (*Rhyncophorus schach*) have been kept well under control. A few fresh cases of Salmon Pink Disease occurred in the coastal districts, but no large areas were affected in any one place. Further work, undertaken with the object of ascertaining the cause or causes of the symptoms at present grouped under this name, has not yet led to any definite conclusions.

Other crops.

Oil Palms.—While there was no sensational development of this new industry during the year, the planting and general development of estates proceeded unchecked. The total area alienated for this cultivation in Malaya amounts to nearly 37,000 acres, of which 18,321 acres have been planted. Four estates are now equipped with up-to-date machinery for extracting oil and kernels.

The exports for 1927 were 915 tons of oil and 185 tons of kernels. The average price of African oil has been about £36 per ton and that of kernels about £20 per ton. The Malayan oil realised better prices than those quoted for supplies from Africa.

All the local information at present available concerning this crop was published towards the end of the year in a special number of the *Malayan Agricultural Journal* entitled "The Oil Palm in Malaya".

A preliminary survey of the various types of oil palm growing at the Experimental Plantation, Serdang, indicates that the range of variation in this crop is sufficient to render profitable the selection of the best type of palm for plantation purposes.

The development of the oil palm industry has given rise to a number of problems, some connected with the cultivation of the palm itself and others with the efficient production of a high grade oil in the factory. Certain of these problems have already been solved, while a number of others are being carefully investigated.

Pineapples.—Interest in this crop appears to be well maintained. Exports of canned fruit from Malaya amounted to approximately 40,000 tons valued at 8½ million dollars. Johore remains the principal centre of this industry, but the factory at Klang obtained its supply of fruit locally in Selangor.

The market experienced many vicissitudes during the year. At one time there was an accumulation of stocks, but sales increased in the later months, thereby easing the situation.

Chemical investigations have shown that alcohol, or concentrated syrup, in addition to a cattle feed, or manure, can be prepared from the parings which at present accumulate in refuse heaps and become a source of danger as breeding grounds for insect pests.

Nipah.—The palms on the two existing estates continued to make satisfactory progress and the planted area was increased.

The investigations on the production of alcohol from nipah palms were concluded and the published results show that an annual yield of 1,200 gallons of alcohol per acre may reasonably be expected.

Apart from the production of power alcohol, this palm has potentialities as a source of acetic acid.

Tuba Root (Derris spp.).—The utilisation of tuba root in the preparation of an insecticide is engaging the attention of investigators in various countries. Locally the Department of Agriculture is studying the insecticidal value of different varieties grown at Serdang. It is hoped that these investigations will eventually widen the market for this product.

The area planted with tuba in Malaya now exceeds 2,000 acres.

Coffee.—There has been an increase in the area planted with coffee during the year, but a very considerable further increase is necessary to supply the local market which absorbed net imports valued at over 2¼ million dollars.

In addition to the local market, there would appear to be good prospects of business with other countries, particularly Australia where coffee imported from British territories has recently been granted the advantage of a preferential tariff.

Tea.—Some interest has been shown in the possibility of developing the local cultivation of tea. Certain imported varieties are growing well at Serdang and on Cameron's Highlands.

One lowland estate is exporting to England the produce of a comparatively small area.

Both a local and an external market await growers in Malaya, if they can produce teas of the grades desired.

Areca Nuts.—A decline in production during the year was accompanied by a local fall in price, since the heavy rains at the end of 1926 and the beginning of 1927 adversely affected both the quantity and the quality of the local product.

Yields of individual palms have been recorded at Serdang and young palms of twenty different types have made good growth at the Coconut Experiment Station, Klang. Thus, a basis for selection work is being established.

Bananas.—The local demand would appear to justify some extension of the area planted with this crop.

Malaya, Siam and Burma are thought by many to be the original home of the banana and are rich in local varieties. The Department of Agriculture is co-operating with the Royal Botanic Gardens, Kew, and the Imperial College of Tropical Agriculture, Trinidad, in an attempt to produce a banana with good market qualities resistant to the destructive Panama Disease.

Sisal Hemp.—The possibility of the commercial production of Sisal hemp locally has attracted attention during the year.

Pepper.—The shortage of supplies, resulting in the present high price, appears worthy of the attention of those having some knowledge of pepper cultivation.

Government Experimental Plantation.—Various minor food crops and vegetables have received attention at Serdang. Information concerning these has been published as it became available and planting material has been distributed.

With the objects of planting up an orchard and satisfying the local demand for planting material, a fruit nursery was fully stocked early in the year.

Further supplies of seed of the trees yielding chaulmoogra oil have been obtained for the purpose of extending the planted area.

Experiments with tapioca have been continued and chemical analyses have been made to determine the quantities of food constituents removed from the soil by these plants under different methods of treatment. The chemical work has led to an investigation of the efficiency of methods available for sampling a standing crop.

Considerable progress has been made in establishing a stock farm at Serdang with the object of carrying out experiments on the breeding of milch cattle. Thirteen head of cattle have all thrived well and have been fed entirely on locally grown food-stuffs.

The preliminary results obtained with various fodder and grazing grasses have been satisfactory.

Cameron's Highlands.

Steady progress has been made on the experimental area at Cameron's Highlands. Upland crops such as tea, cinchona, cardamoms and coffee are being established. Attention is also being given to the cultivation of sub-tropical fruits, vegetables and ornamental plants.

Soils.

The creation of a composite Division of Soils and Plant Physiology enabled the Department of Agriculture to commence work on a definite programme of soil investigations.

The most urgent problem is the establishment of soil types on a geological basis. For this purpose a soil survey was commenced in a limited and accessible area including all the important geological formations on the west side of the Peninsula.

At the end of the year a fairly complete idea of the distribution of the upland, as opposed to the coastal, types of soil in the area chosen had been obtained.

A comprehensive survey of padi soils was also commenced with a view to ascertaining the soil factors affecting fertility.

No correlations have yet been established between yield and any soil factor, but one observation of importance which has emerged is that the presence of a medium, or even high, percentage of sand does not necessarily result in low yield. Consequently great caution must be used in condemning any proposed padi area on the score of a high sand/clay ratio.

Chemical investigations.

A satisfactory method of coagulating jelutong latex by boiling has now been worked out and is being adopted by Chinese producers. Jelutong prepared in this way commands a premium on the market.

Of the two kinds of deterioration common to native jelutong the development of blackening has been overcome and the cause of resinification and granulation is being studied.

An investigation has been commenced of the efficiency of the local methods of distilling alcohol from rice. The results so far obtained disclose a considerable waste of rice, in consequence of which the possibility of introducing improved methods of distillation will be examined.

Agricultural Shows.

The Malayan Agri-Horticultural Association held its fifth Annual Exhibition at Kuala Lumpur from July 29th to August 1st. Under the auspices of this Association District Shows were also held at five centres in the Federated Malay States.

School of Agriculture.

The report of the Committee appointed to submit proposals for a School of Agriculture was approved in principle. A site adjoining the Experimental Plantation at Serdang was selected and cleared.

An Advisory Committee for the School, appointed towards the end of the year, submitted preliminary plans and estimates for the lay-out and buildings. These are receiving the consideration of Government.

There is no doubt that such a school is an urgent necessity in Malaya.

Restoration work in areas devastated by floods.

As soon as the floods began to subside in the valleys of the Perak, Pahang and Kuantan rivers, the Department of Agriculture collected. planting material of quick growing food crops and vegetables for distribution among the owners of small holdings in these areas. Much of this material was sent to Pahang where the Malays living along the river were most in need of it.

As the wide deposits of detritus along the banks of the Pahang river commenced to dry, it became possible to plant them with padi and for this purpose large quantities of seed were obtained and distributed.

In the last quarter of the year, after the work of planting up vegetables and padi for immediate food requirements had been completed, supplies of seed coconuts and young fruit trees were distributed in Pahang to replace some of those destroyed.

The Malays in Pahang worked well in face of serious odds and the recovery of the country along the river has been more rapid than could at first have been anticipated.

Export of rubber.

The rubber exported from the Federated Malay States during 1927 was 127,602 tons, including 1,560,976 gallons of latex, as compared with 160,213 tons and 2,059,655 gallons in the preceding year.

Restriction.

The Rubber (Restriction) Enactment remained in force throughout the year. At the beginning of 1927 the percentage of release was 80 per cent. In accordance with the restriction scheme the percentage was reduced to 70 per cent. on the 1st February, 1927, and to 60 per cent. on the 1st of May, 1927. It remained at 60 per cent. throughout the remainder of the year.

The unused balance of Federated Malay States export rights carried forward on 31st October, 1927, was only 5,167 tons as compared with 12,064 tons on 31st October, 1926. As this figure 5,167 tons includes the whole of the dealers' couponed stocks in the Federated Malay States amounting to about 4,000 tons, it will be seen that the amount of unused rights in the hands of producers was almost negligible.

Standard production.

The standard production of the Federated Malay States for the fifth restriction year, which ended on 31st October, 1927, was 190,391 tons.

An amendment was made in the Rubber Restriction Enactment rules with effect from 1st November by which the standard of tapping taken as the basis of assessment was altered from one cut daily on a quarter of the circumference of the tree to one cut every third day on half the circumference of the tree and assessments for the sixth restriction year were made on this basis. This amendment led to considerable controversy and probably to an increase in the number of opponents to the restriction scheme.

FORESTRY.

General.

The year was one of all round progress. The surplus of revenue over expenditure was the highest on record, and schemes of development connected with the exploitation of the forests, and with research and education are gradually being brought into force.

Staff.

At the beginning of the year there were 33 officers on the senior staff of the Malayan Forest Service in addition to the Controller of Timber Supplies and the Timber Accountant. Two of these were on deputation in Johore and one in Kedah, and one was for a few months on special duty in Trengganu. One Assistant Conservator and a Logging Engineer were appointed during the year, and at the end of the year three probationers were under training at Oxford, and a Chemist (to be attached to the Agricultural Department for work on forest products) was temporarily attached to the Imperial Institute prior to taking up his appointment.

The strength of the locally recruited English-speaking staff at the beginning of the year was 17, of whom one was on service in Johore and one under training in Burma.

The sanctioned strength of the subordinate staff was 497, exclusive of clerks, boatmen, and the permanent labour force.

Reserved forests.

At the end of the year there were 5,467 square miles of reserved forest, and 1,233 square miles notified as proposed reserves. The State land forests in the more highly developed parts of the country are now almost exhausted, and each year more and more reliance has to be placed upon the reserves. Where the demand for firewood is large the inferior species can be removed at a profit with great silvicultural advantage: where there is little or no demand it will be necessary to pay for their removal in order to make certain of an adequate supply of the valuable hardwood and money is being provided for the purpose.

Labour and supplies.

Labour conditions improved during the year, but not soon enough to enable the department to supply the railway with its full quota of sleepers without unduly raising the price of other classes of timber. Large numbers of sleepers had therefore to be imported from Australia. At the end of the year, thanks partly to the prohibition of export of the most durable hardwoods, the situation was very much easier; sleepers were coming in freely, and the stocks of timber in the hands of dealers were probably larger than they had ever been before. The improved labour conditions resulting from the fall in the price of rubber also enabled the department to recruit a fairly adequate Malay labour force for urgent silvicultural work.

Timber Industries.

The Timber Industries Committee continued its sittings throughout the year. The experimental wood-preservation plant, which was installed on its recommendation, was brought into use at the end of August, and by the end of the year had yielded information which in the opinion of the Committee justified the purchase of a commercial plant to be installed in conjunction with a modern sawmill in the Palong Reserve, where large-scale experiments in the extraction of timber with modern mechanical appliances are already being carried out under the supervision of the newly appointed Logging Engineer. It is particularly satisfactory to be able to record that local Malays are proving apt pupils, and are rapidly becoming proficient in the use of modern tools and machinery.

Output.

The output of timber, firewood and charcoal on which payment was made was 906,463 tons compared with 877,137 tons in 1925. A fall in the output of firewood, due to the extended use of charcoal and oil, was more than counterbalanced by a rise in the output of timber. Increasing interest is being shown in the manufacture of charcoal, which is still imported in large quantities. There was an increased output of *damar*, *jelutong*, and canes. The gutta-percha market was fairly steady throughout the year, and then collapsed just when tappers had been secured; it cannot now be tapped at a profit, and it is doubtful whether the market will ever recover its former strength owing to the advantages possessed by wireless telegraphy over telegraphy by submarine cables which consume most of the gutta-percha produced.

Forest Research Institute.

Plans for the proposed Forest Research Institute at Kepong were prepared and passed, and tenders were called for after the close of the year. A vernacular forest school for twelve students has been established, and the first course was begun in September under the direction of an Assistant Conservator.

Chemical investigations.

Further problems connected with *damar penak*, *jelutong*, dragon's blood, gum benjamin, tannin, and *terap* bark were investigated by the Chemists of the Agricultural Department and the Institute for Medical Research. The process for the coagulation of *jelutong*, which was described as satisfactory last year, was improved upon to such an extent that it can now be brought about within a few minutes, as compared with the three or four days required by the old method. Dragon's blood was purified and produced in a form which may considerably enhance its value. A thorough investigation of the tannin content of the bark of the common mangrove species was started, but is expected to take some months to complete.

Industries.

A new industry, namely, the manufacture of veneers and plywood, was started at a factory at Rantau Panjang on the site formerly occupied by Malayan Matches Ltd. The company expected to start producing early in 1928. The wood distillation plant at Krambit, which suffered so severely from flood damage and isolation, was again working in July, and continued for the rest of the year, though not at full pressure.

Publications.

Dr. Foxworthy's "Commercial Timber Trees of the Malay Peninsula" appeared in October as Malayan Forest Record No. 3, and received appreciative reviews. It is generally recognised that this work has set a very high standard in its class, both as regards the manner of its presentation and the quality of its production. Messrs. Blair and Byron summarised the results of their own and other Chemists' investigations, and published "Notes on *Damar Penak*" as No. 4 of the same series. Mr. Watson's list of vernacular and botanical plant names was completed and given to the printer as No. 5, whilst good progress was made with No. 6, which is intended to deal with the mangrove swamps in some detail.

MINING.

Export of tin.

The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 52,179 tons compared with 45,947 tons in 1926 and 45,926 tons in 1925. The export of tin-ore represents about 92.7 per cent. of the total. It is interesting to observe that the 1927 exports were the highest ever recorded from the Federated Malay States. The export duty (in millions of dollars) was $17.4 in 1927, $15.6 in 1926 and $14.00 in 1925.

Price of tin.

The price of tin at the beginning of the year was $151.75 per pikul, and by the beginning of March had improved to $159 per pikul which was the highest price quoted for the year. Thereafter a fluctuating downward movement set in culminating on November 11th when the lowest price recorded for the year was reached, viz., $127.37½ per pikul. The year closed with the price standing at $131 per pikul. The average price for the year was $144.93, which was .34 cents higher than the average price for 1926.

Fluctuations in price of tin.

The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

Heading.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
	$	$	$	$	$	$	$
Highest ...	*115.00	93.62	121.00	148.00	145.50	157.50	159.00
Average ...	85.04	80.64	101.75	124.19	131.77½	144.59	144.93
Lowest ...	72.00	71.75	88.50	100.75	116.00	131.75	127.37

* Government purchase price.

Labour The labour force engaged in mining (including dulang pass holders) was 130,424 at the end of the year. The figures for the preceding three years were: in 1926, 116,216; in 1925, 115,049; in 1924, 114,273. The total does not include labour employed on the extraction and transport of firewood.

Generally there was no shortage of labour during the year but the large programme of dredge construction has caused a scarcity of fitters.

Tungsten. The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for this and the previous year:

	Wolfram.	Scheelite.
1927	20.00 tons	Nil
1926	49.40 ,,	40.18 tons

Gold. The production of gold from the Raub Gold Mines was 9,919 ounces as compared with 12,981 ounces in 1926. In addition alluvial gold was recovered in various places to the extent of 1,839 ounces.

Coal. The production of coal from the Malayan Collieries Ltd., Selangor, was 449,580 tons, a decrease in production of 6,942 tons on the previous year. Consumption was as follows:

Federated Malay States Railways	166,364 tons
Mines	238,869 ,,
Other Federated Malay States consumers	9,482 ,,
Exported	862 ,,
Consumed at the Collieries	34,003 ,,
	449,580 ,,

The Enggor Coal Syndicate Ltd., Perak, which reached the producing stage in the latter part of 1925, produced during 1927, 13,421 tons. The output was consumed as follows:

Federated Malay States Railways	10,497 tons
Mines	2,270 ,,
Consumed at the Colliery	654 ,,
	13,421 ,,

The demand and search for dredging land is as keen as ever but payable ground is becoming increasingly difficult to locate. At the end of 1927 the number of dredges at work was 70, the number under construction 21 and the number on order 23. There are two dredges under construction which have been designed to dig to a depth of 120 feet; the maximum depth obtained hitherto has been 85 feet. Bucket dredging.

Mining by means of gravel pumps is still increasing in popularity and the number of such pumps in use at the end of 1927 was 645 as against 577 in 1926. Gravel pumps.

The comparative immunity from thefts of ore enjoyed by the mining community for a considerable number of years past was unfortunately broken by a series of minor thefts which occurred in the Tronoh, Pusing, Papan area during the year. Eight cases, involving quantities of two to three pikuls of ore in each case, were reported. Apparently the same gang of thieves was responsible for all the thefts. It was ascertained that the stolen ore was subsequently sold by dulang women under the authority of their dulang passes. Steps were taken by the Mines Department to deal with the matter and a new rule under the Mineral Ores Enactment was passed which compels the ore-buyer to enter on a book attached to the dulang pass the date, weight and value of all ore sold by the holder of the pass. Mineral Ores Enactment.

The very extensive floods that occurred at the end of 1926 did a great deal more damage to the Pahang Consolidated Mine than at first appeared. They did not start milling till April and consequently there was no output from the mine for the first three months of the year. Floods.

Both Raub Australian Gold Mining Co. Ltd. and Rahman Hydraulic Tin Ltd. also suffered but the other mines escaped in a remarkable manner.

IV.—TRADE AND ECONOMICS.

The aggregate value of trade for the year 1927 was $516,086,797, shewing a decrease of $103,401,130 or 16.69 per cent. as compared with the record value of the year 1926. The chief items responsible for the decrease were rubber and copra. The floods at the beginning of the year adversely affected the export of copra, considerable damage being done to coconut areas in Perak and Pahang. Notwithstanding this decrease the general trade of the country must be considered satisfactory. Trade.

The distribution per head of the population was $348 as compared with $442 in 1926.

The aggregate value of exports exceeded the value of imports by $163,764,409 or nearly 93 per cent.

The total values of imports and exports for the last seven years are as follows:

		Imports.		Exports.		Trade balance in favour of exports.
		$		$		$
1921	...	103,012,606	...	135,485,376	...	32,472,770
1922	...	78,822,349	...	140,429,775	...	61,607,426
1923	...	89,088,237	...	197,100,950	...	108,012,713
1924	...	97,436,302	...	212,884,740	...	115,448,438
1925	...	137,116,207	...	411,878,610	...	274,762,403
1926	...	173,887,724	...	445,600,203	...	271,712,479
1927	...	176,161,194	...	339,925,603	...	163,764,409

Distribution of trade.

The percentage distribution of trade for the last five years is as follows:

IMPORTS.

—	1923.	1924.	1925.	1926.	1927.
Singapore	47.03	43.96	45.43	43.25	39.78
Penang	25.00	23.69	23.31	21.22	18.90
Malacca	92	1.23	1.13	1.01	1.06
Unfederated Malay States ...	3.31	3.07	2.38	1.38	1.11
United Kingdom	9.78	11.08	12.00	13.35	15.53
British Possessions	4.91	7.47	5.47	5.95	5.78
Foreign countries	9.05	9.50	10.28	13.84	17.84
	100%	100%	100%	100%	100%

EXPORTS.

	1923.	1924.	1925.	1926.	1927.
Singapore	29.09	29.50	22.00	22.56	22.61
Penang	39.09	41.76	29.75	26.17	32.32
Malacca	3.82	2.84	3.30	2.89	2.58
Unfederated Malay States ..	.08	.30	.23	.26	.30
United Kingdom	13.61	9.87	15.47	18.62	18.22
British Possessions	.71	.80	.72	1.22	1.08
Foreign countries	13.60	14.93	28.53	28.28	22.89
	100%	100%	100%	100%	100%

The total revenue from Customs, Excise and the Chandu Monopoly amounted to $58,240,779, being a decrease of $882,389 on the revenue collected in the previous year mainly due to a slight falling off in receipts under Customs and Chandu. Excise revenue is small, as compared with figures for Customs and Chandu, but it is steadily on the increase, being $2,621,069 in 1927 as compared with $2,276,704 in 1926. Revenue from Customs, etc.

Import duties contributed $8,947,779, being $374,617 in excess of the import duties collected in 1926. Export duties totalled $26,506,472, a decrease of $546,789.

The nett revenue from the Chandu Monopoly was $14,950,000 as compared with $15,110,897 in 1926. Opium.

There was during the greater part of the year a marked increase in rubber smuggling due to the reduction in the exportable allowance of rubber which varied from 80 per cent. in January to 60 per cent. in May. The Preventive Branch worked at high pressure to cope with organised bands of smugglers who, by changing their tactics and by continually shifting from one part of the coast to another, kept their pursuers busy. Rubber.

It is satisfactory to note that there was a considerable diminution of this evil during the last few months of the year.

The following comparative table gives the number of seizures, convictions and fines imposed for the whole restriction area during 1926 and 1927:

	No. of boats seized.	No. of persons convicted.	Fines imposed. $
1926	58 ...	130 ...	544,521
1927	277 ...	508 ...	2,559,095

The Preventive Branch devoted considerable time to enforcing the provisions of the Rubber Supervision Enactment to prevent illicit dealings in rubber stored under conditions which appeared to indicate its early removal for smuggling. The following table shows the number of prosecutions under the Enactment:

	1926.	1927.
Prosecutions	61 ...	228
Convictions	56 ...	194

Shipping.

A satisfactory feature of the year under review is the continued increase in cargo handled at Port Swettenham. The number of ocean-going steamers, which called at Port Swettenham during the year, was 652 with a tonnage of 2,500,383 against 595 with a tonnage of 2,349,066 in 1926. The number of local steamers calling at the port was 842 with a total tonnage of 407,566 against 751 with a tonnage of 371,613 in the previous year. The number of ocean-going vessels, which came alongside the wharf, was 161 as against 21 in 1926. This expedited the delivery of cargo and relieved the congestion of lighters.

COMPANIES.

During the year, 48 local companies with a total nominal capital of $25,008,570 were incorporated and registered as compared with 56 companies ($35,764,500) in 1926, 38 companies ($19,285,166) in 1925, and 25 companies ($12,324,763) in 1924.

The purposes of the new local companies were rubber planting (9), mining (9), mining and rubber planting (4), general trading (8), broking (6), engineering and contracting (2), oil palm extraction, theatre, hospital, motors, manufacturing of cement, manufacturing of bricks, dealing in phosphates, broadcasting service, dealing in timber and acting as trustee (one each).

The number of companies in liquidation in 1927 was five, while seven local companies were struck off the register as defunct.

There were 575 companies on the register at the end of the year.

BANKRUPTCY.

During the year, 145 bankruptcy notices were issued, 57 bankruptcy petitions filed, 26 receiving orders and 25 adjudication orders made.

There was a decrease in the work as compared with the preceding year in Perak, while the work in Selangor showed a marked increase.

Seven compositions were approved by the Court.

There were three criminal proceedings in bankruptcy.

Eleven applications were made for discharge, of which seven were granted.

CO-OPERATION.

Staff.

The European staff of the department consisted of the Director and an Assistant Director. The Director was on leave during seven months of the year and during his absence the department was in charge of the Assistant Director, who had also to supervise the work in the Straits Settlements, Kedah and Perlis. An additional officer of the Malayan Civil Service was posted to the department at the end of October, 1927.

The Asiatic staff consisted of one Assistant Registrar, one Auditor and Accountant, one Senior Co-operative Officer, 13 Malay Co-operative Officers and one Indian Officer and six clerks. The department is finding constant difficulty in recruiting suitable Malay officers.

Expenditure.

The expenditure, inclusive of the salaries of the European staff, was $99,533. The ratio of cost of administration to the aggregate working capital of the societies showed a still further decrease from 8.75 per cent. in 1926 to 6.97 per cent. in the current year.

Progress.

The feature of the year's work was consolidation rather than expansion.

The following table reveals the position on 30th June, 1927, which is the end of the co-operative financial year:

Year.	No. of societies.	No. of members.	Total working capital.	Paid up capital.	Reserves.
			$	$	$
1923 ...	19	2,361	73,461	66,981	480
1924 ...	40	6,564	293,193	261,677	5,656
1925 ...	65	8,995	479,314	429,696	6,652
1926 ...	101	12,586	950,291	863,370	16,550
1927 ...	105	14,589	1,428,601	1,344,961	36,921

These figures represent entirely privately subscribed capital.

The only disquieting feature in the audit report is the growth of loans overdue. This is attributable in part to the comparative failure of the Krian padi crop and the fall in the price of rubber.

Co-operative rubber factories.

An Officer of the Agricultural Department was seconded to the department during the year. After an inspection of several rural credit societies mainly dependent on rubber, an exhaustive report was submitted which revealed the unsatisfactory position of most of the small holders of rubber. It is held that not only is the peasant wasting his resources by inefficient methods but the lack of organised selling and poor methods of manufacture rob him of a large share of his potential profits. A successful co-operative rubber factory would probably not only reduce the cost of smoking and machining but secure an all round higher price by turning out better sheet. It is proposed to start six co-operative rubber factories as an experiment in the near future. If they prove successful, it is hoped that by these means it will be possible eventually to organise the mass of small holders, thereby greatly assisting the rubber industry generally.

Co-operation amongst the Chinese.

A sub-committee of the Co-operation Board recommended that work amongst the Chinese should be started as soon as possible.

Indian estate labourers' societies.

A definite start was made with Indian estate labourers' societies. There were three societies with a membership of 511 and a paid-up capital of $4,154 on the register on June 30th, 1927, and five more societies have since been registered. Inquiries from managers of estates from all parts of Malaya have been received and as soon as the necessary staff is trained a large extension of this work may be expected.

Co-operative Bank of Malaya.

A joint Committee representing the Planters' Loans Board and the Co-operation Board was appointed to consider the question of the establishment of a Co-operative Bank of Malaya. In view of the rapid increasing surplus assets of co-operative societies which now total $426,904, and the need in this country for both agricultural and non-agricultural credit, the Committee recommended the formation of a Co-operative Bank which eventually would take over the functions of the Planters' Loans Board. The question was receiving the consideration of the Secretary of State at the close of the year.

V.—COMMUNICATIONS.

Posts and Telegraphs.

Postal.

There are now 102 post offices and 58 places at which postal business is transacted by railway station masters and others. The estimated number of articles posted and delivered was over 36 millions.

Money orders.

Money orders numbering 339,631 were issued and paid, the total amount representing $20,722,562, an increase of 17,364 in number and a decrease of $1,880,783 in amount. Telegraph money orders numbering 13,391 for $1,155,768 were issued and paid.

Savings Bank. The number of Savings Bank depositors on the 31st December, 1927, was 32,595, an increase of 2,792 during the year. The average amount standing to the credit of depositors decreased from $121 to $111. The excess of withdrawals over deposits during the year was $78,110. The number of Malay depositors increased from 6,219 to 7,070.

Telegraphs. The number of telegrams despatched and delivered was 980,513, an increase of 5,475.

Telephones. The total number of subscribers connected to the telephone exchanges at the end of the year was 4,003, an increase of 553 compared with 1926. There were also 1,871 extension lines, extension bells and private lines, etc., maintained by the department, an increase of 273. On 31st December there were 2,602 miles of telegraph and telephone lines and 21,716 miles of overhead wires, of which 18,483 miles were telephone wires. In addition there were 102 miles of underground cable, the length of single line in the cable being 9,908 miles. These figures do not include railway wires nor the 123 miles of line (606 miles of wire) owned and maintained by the department in Johore. Four additional public telephone exchanges were opened during the year at Jelebu, Batang Berjuntai, Bentong and Menglembu. Many new trunk lines were established to connect these exchanges with the system and to meet increased traffic. The trunk telephone revenue was $317,380 or over 14 per cent. greater than in 1926. The general telephone revenue was $1,062,562, an increase of over 17 per cent. over the figures for 1926.

Malayan Trunk Telephone Scheme. The Scheme for a Malayan Trunk Telephone Cable between Singapore and Penang was (after consideration by a Conference of Representatives of the Federated Malay States, Straits Settlements and Johore) abandoned mainly on financial grounds. Developments in wireless telephony and telegraphy have rendered doubtful the justification for embarking on expensive underground cable schemes.

Financial. The nett revenue collected by the department was $2,756,186, an increase of $233,725. Annually recurrent expenditure amounted to $2,058,140 and special expenditure (including loan account) to $981,606. The value of the services performed free of charge for other Government departments, estimated at $213,667 is not included in these figures, which also exclude temporary and acting allowances amounting to $190,065.

Wireless.

Two short-wave transmitting and receiving sets for the conduct of wireless experiments throughout the Peninsula were received in October but, owing to certain faults in the apparatus, they could not be brought into operation before the close of the year. On the results of these experiments, since inaugurated, must depend the wireless policy of the administration.

Railways.

General.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines: the West Coast line runs north-north-west through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour—about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier Station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, Kelantan. It is completed and opened for traffic as far as Merapoh Station, 43 miles beyond Kuala Lipis, the capital of Pahang, and 184½ miles from Gemas. Merapoh is the last station in Pahang territory and is about 3 miles from the frontier. At the end of 1927, the permanent way had been laid to five miles beyond the Kelantan frontier. A section of 63 miles in Kelantan between Tumpat on the East Coast and Manek Urai, is open for traffic, and this line when extended southward will meet the East Coast line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Manek Urai towards Pahang. The distance between railheads in Kelantan is 58½ miles. Earthwork, etc., is in progress up to the Pahang boundary. An extension—13 miles long—has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to

Haad Yai junction, 145 miles distant, where a junction is made with the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on November 1st, 1921.

Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld. At Prai on the mainland opposite Penang, certain work on the wharves has been carried out. A causeway to carry two lines of rails and a roadway has been built across the Johore Strait connecting the Island of Singapore with the mainland.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,035 miles. The line is of metre gauge. On the mail trains on the West Coast main line, there are sleeping saloons and restaurant cars. There are 254 permanent stations and 33 flag stations.

The expenditure on capital account (including lines not yet open for traffic) was $211,581,362 up to 31st December, 1927, of which $171,890,773 was met from revenue, and $39,690,589 from loan account.

Financial.

The receipts in 1927 from all sources were $23,055,515, an increase of 6.54 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $19,449,503, an increase of 27.85 per cent. The nett surplus for the years' working therefore amounted to $3,606,012 compared with $6,427,445 in 1926: the falling off is largely due to an expenditure of $1,523,727 on flood restoration in open line areas. This surplus has been transferred to reserve as the nucleus of a Railway Renewals Fund.

Rates.

There were no changes in the general rates and fares during the year.

Train control.

A system of train control introduced in January, 1922, over a busy section of the line covering 105 miles has proved very satisfactory in controlling the movement of rolling stock, checking unnecessary haulage and in cases of breaches on the line expeditiously restoring communication. With the introduction of this system an enormous number of telegrams has been reduced. The system has been extended and now controls the main line between Ipoh and Gemas (239 miles).

Passengers. The number of ordinary passengers carried was 14,555,190 in 1926 and 14,171,105 in 1927. The total receipts from passengers shew an increase of $246,361 (2.81 per cent.).

Goods. Receipts from goods train traffic rose by $759,870 from $9,428,593 to $10,188,463.

Capital expenditure. During the year the nett expenditure on capital account was $6,439,767 as compared with $5,441,346 in 1926.

Construction. On the Kelantan section the line was opened for traffic as far as Manek Urai (63rd mile) and platelaying completed to the 70th mile and from the 76th to 82nd mile, and along 5½ miles near the Pahang boundary. Earthwork is well in hand over the whole section. Tunnels at the 69th mile have been completed while work in the tunnels at the 74th, 85th and 94th miles is well advanced. The expenditure on this section during the year amounted to $3,153,570.

Work on the Pahang section was reopened at the beginning of 1924 and work on the whole length to the Kelantan boundary at the 188th mile, including a tunnel at the 172nd mile, has been completed. The expenditure during the year amounted to $385,005.

Other works. The new Engine and Carriage Sheds and Goods Yards at Seremban were completed, as also were the Goods and Marshalling Yards at Ipoh. Good progress was made on the Klang River Bridge. Work on the Kuala Lumpur deviation and doubling of the line from Batu Junction to Kuala Lumpur, including a double line tunnel under Police Head-quarters at Kuala Lumpur, progressed satisfactorily and the down line was opened for traffic. The work on Victory Avenue between the Railway Office and the Chartered Bank had progressed far enough to admit of the road being open for traffic.

Work on the scheme for a supply of water to Prai from Bukit Serayah was started in February, 1925, the modified scheme being completed during 1927.

A housing scheme for the Railway subordinate, artisan and menial staff estimated to cost $4,765,000 was commenced in 1926 and on 31st December, 1927, 131 units had been completed and 634 units were in hand. The main portion of the scheme is the railway settlement at Sentul, near Kuala Lumpur. The scheme provides 1,740 additional units.

As a result of the abnormal floods in December, 1926, the East Coast Railway north of Triang and the Kelantan Railway were still closed for traffic at the beginning of the year: traffic was resumed over different sections of these lines at various dates between the 8th February and 1st June, 1927. Floods.

The Railway Board held 12 meetings during the year. It is composed of three official and six unofficial members: of the unofficials two are appointed from the Colony, one residing in Singapore and the other in Penang. Railway Board.

Roads.

There are 2,600 miles of metalled roads, 113 miles of unmetalled roads and 1,972 miles of bridle-paths. The average cost per mile of maintaining all metalled roads was $1,476 in 1927 as against $1,430 in 1926. The total expenditure on maintaining roads, streets and bridges was $3,834,550. The total mileage of roads treated with bituminous compounds is 904, of which 292 were added during the year.

There were no serious inundations during the year subsequent to the record floods which visited the country in December, 1926-January, 1927, and which caused widespread damage to the roads in all the four States. Restoration of much of the damage was carried out at a cost of $1,444,612, considerable improvements being effected in the process. In Pahang where the Sungei Lepar caused vast devastation, the construction of the deviation proceeded apace and through communication by road to Kuantan was almost re-established prior to the wet weather at the end of the year. In spite of the admirable efforts of the department, a considerable amount of restoration work still remains to be done in this State.

Road improvements, including widening, straightening and raising were carried out in all district roads.

VI.—JUSTICE, POLICE, PRISONS.

Police.

The approved strength of the Force on the 31st December, 1927, was 4,158 officers and men distributed in 182 police stations and 17 posts. New posts were established at Ayer Kuning and Kamunting in Perak and at Fraser's Hill. Strength.

The Force was 11 officers and 38 other ranks under strength at the end of the year.

Of the 46 Gazetted Officers 4 are Malays.

Considerable difficulty was experienced in obtaining suitable Malay recruits: Indian recruits offered themselves in large numbers.

Training.

The standard of training in drill and musketry at the Police Depôt was maintained and special efforts were made to improve the system of instruction in the schools in co-operation with the Education Department. The year was marked by a very considerable advance in the instruction of Probationary Assistant Commissioners, Probationary Asiatic Inspectors and English-speaking Detectives in law and other subjects necessary for their profession.

Crime.

The year's total of serious crime, which includes murder, gang-robbery and robbery, shows an increase of 30 per cent. on the total for 1926 which was a record low year. The 1927 total, viz., 160, is however well below the quinquennial average of 176. Towards the end of the year a quite inexplicable wave of homicide arose which, though scarcely evident in Negri Sembilan and Pahang, was serious in Selangor but much more serious still in Perak. This murder wave raised the figures from 23 recorded murders in Perak in 1926 to 48 in 1927 and to 25 in Selangor as compared with 18 in 1926. The total number of murders was 86, of which only 11 were accompanied by robbery, and amongst these latter in several cases murder was the true motive and robbery only incidental.

Gang-robbery cases numbered 15, one less than the low record of the previous year.

Robbery figures show an increase of 19 over the low record of 1926 and repeat the 1925 total of 59. The Kinta Valley towards the end of the year became a little disturbed and was largely responsible for this class of crime which up to then had been well in check: no organised gang however obtained any hold during the year.

The total number of seizable offences of all kinds for the year is 5,063, which shows a very gratifying decrease on the record low total of 5,641 for 1926, and is very much below the average of 7,009 for the past five years. This satisfactory decrease may, in the opinion of the Director of Criminal Intelligence, be reasonably attributed to better police control of the criminal elements in the country, due to better investigation methods and to a newly awakened interest and eagerness amongst all ranks to take an active share in the conduct of investigations and in the surveillance of bad characters.

Progress continues to be made in the development of the Criminal Intelligence Branch. Criminal Intelligence.

The work of the Criminal Registry (Finger-print Bureau) was carried out as in former years with the utmost reliability and expedition.

PRISONS.

Statistics. There are six prisons in the Federated Malay States. On the 1st January, 1927, they contained 944 prisoners against 1,001 on the 1st January, 1926; during the year 5,568 were admitted; and 1,123 remained at the close of the year. The daily average figures were: Civil Prison, 125; short-sentence and revenue grade, 474; long-sentence and condemned, 455. Nineteen executions were carried out. No prisoner escaped. Four prisoners committed suicide. The daily average of sick was 2.00 per cent. as compared with 1.51 in 1926. There were 32 deaths, of which 1 was from malaria, 1 from phthisis, 1 from pneumonia, 5 from beri-beri and 24 from other causes.

Expenditure. The total expenditure of the department totalled $488,766. The daily average of 1,054 prisoners was maintained at a nett cost of $431,944, giving an annual cost per head of $409. The annual cost in 1926 was $396 and in 1925 $335. The increase was principally due to the introduction of new scales of salary for the European and Asiatic staff.

Works. An additional workshop at the Convict Establishment, Taiping, was partially completed during the year solely by prison labour.

VII.—PUBLIC WORKS.*

General expenditure. The total expenditure authorised for the year was $28,802,099, of which $21,087,943 was spent, being an increase of $4,814,661 or 30 per cent. above that of the previous year. The year was a record one and the expenditure exceeded that of the former record year, 1921, by nearly 1½ million dollars.

The cost of administration ($1,647,274) represents 7.81 per cent. of the total expenditure as against 10.42 per cent. in 1926. The expenditure under Annually Recurrent amounted to $8,242,104: the unexpended balance was $454,844.

Buildings. The annual maintenance of Works and Buildings cost $1,303,807, which represents 3.10 per cent. of the total cost of the buildings, as against 2.86 per cent. in the previous year.

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* Roads are dealt with under Part V.

Six hundred and fourteen new buildings were erected. The total number of buildings maintained was ten thousand eight hundred and fifty-one, valued at $42,042,670. Quarters for forty-six senior officers and one hundred and sixty-eight subordinates were completed.

In connection with the shortage of housing accommodation in Kuala Lumpur and pursuant to the recommendations of a Committee of Enquiry appointed by Government, a type of concrete house, which could be rapidly constructed, was evolved by the Selangor Public Works Department in conjunction with a local contractor and thirteen houses of this type were erected in Kuala Lumpur. This had the effect of reducing building prices generally.

Good progress was made on the construction of the English school at Kuala Kangsar and the Supreme Court at Ipoh and work was commenced on the Chinese Protectorate in Kuala Lumpur and the Central Decrepit Camp at Sungei Buloh. The new Institute of Medical Research and the Chinese Free School at Kuala Lumpur were almost completed and the new Victoria Institution was commenced, His Highness the Sultan having laid the foundation stone in October. New post offices were erected at Bentong and Kuantan.

Rivers. Six hundred and twenty-eight miles of river channels were cleared at a cost of $268,816.

Waterworks. The capital cost of all waterworks is $11,792,546, the cost of maintenance for the year was $214,641 and the revenue collected $635,405.

Fraser's Hill. The expenditure on the development of Fraser's Hill was $213,900, the amount spent on maintenance being $98,500. It is satisfactory to record that more buildings are being erected by private enterprise.

Cameron's Highlands. The road to Cameron's Highlands was completed to beyond the 15th mile from Tapah and the formation constructed to near the 19th mile. Owing to lack of progress displayed by the earlier contractors engaged on the road, the former contracts were cancelled and a "schedule of rates" contract entered into with a Singapore firm to complete the road in three years' time. The expenditure in connection with the road and preliminary development work for the year amounted to $377,718.

A detachment of Burma Rifles was engaged in clearing operations at Tanah Rata. About 100 acres of jungle were felled by this unit and in addition 16 acres were felled, cleared and burned. The cost however was high and it is improbable that the experiment will be continued.

Tenders.

Generally, it may be said that there was a steady fall in prices throughout the year. Labour has been more plentiful although the dearth of skilled artizans continues.

Reputable firms of European contractors frequently submitted competitive tenders without success.

ELECTRICITY SUPPLY.

General.

From 1st January, 1927, the Electrical Department, which had hitherto been a branch of the Public Works Department, was made a separate Federal Department under a Director.

This step was considered necessary owing to the great development of electricity throughout the Federated Malay States during the past few years and the increasing expenditure on plant and apparatus.

Development.

The year under review has been one of remarkable growth in the generation and application of electricity throughout the country, and considerable extensions were carried out to both public and private installations.

Work was commenced on the hydro-electric scheme in Perak by the Perak River Hydro-Electric Power Company which has the concession for electric power supply in the Kinta valley.

By the end of the year considerable progress had been made in the preparation of the dam site at Chenderoh, and work was well in hand on the Auxiliary Steam Station at Malim Nawar. It is anticipated that a supply of electric power will be available for mining and for the lighting of certain small towns from the Malim Nawar Station towards the end of August, 1928.

A large power station was completed and put into service in Kuala Lumpur and additional plant was installed in the Government Power Stations at Ipoh and Seremban. The construction of new power stations was undertaken by the Government at Klang and Taiping, and these are expected to be in operation in September, 1928.

A complete scheme was evolved for a power station and distribution system for Kuala Lipis and materials were indented for.

The Electrical Department took over all electrical work in connection with the railway, and from July all the power for the Central Workshops of the Federated Malay States Railways in Kuala Lumpur was supplied from the new Bungsar Power Station.

A new electric station was erected in Telok Anson and before the end of the year a full supply of electricity was available there. This concession was given to a private company.

Estimates and schemes were prepared for electric supply to Gemas, the Central Mental Hospital at Tanjong Rambutan and Ulu Buloh Leper Settlement.

Inspections were made at Port Dickson, Kuala Pilah, Kuala Klawang, Tampin, Bentong, Port Weld and Fraser's Hill in connection with proposed schemes for these places.

The township of Rawang was electrically lighted, a bulk supply being purchased from the Rawang Tin Ltd.

The question of co-ordinating many of these schemes is one which will require serious attention in the not far distant future.

Financial.

The capital value of the Kuala Lumpur undertaking at the end of 1927 was	$4,317,381
The total revenue earned was	648,724
The total expenditure was	370,469
The balance transferred to net revenue was	278,254

IPOH.

The capital value of the Ipoh undertaking at the end of the year was	$880,438
The total revenue earned was	280,590
The total expenditure was	133,041
The balance transferred to net revenue was	147,549

SEREMBAN.

The capital value of the Seremban undertaking at the end of the year was	$475,661
The total revenue earned was	157,765
The total expenditure was	74,240
The balance transferred to net revenue was	83,524

VIII.—PUBLIC HEALTH.

VITAL STATISTICS.

Births and deaths figures are obtained from notifications compulsory under the Registration of Births and Deaths Enactment which is everywhere in force. The total number of births and deaths is approximately correct. The accuracy of diagnosis as to causes of deaths is in many cases open to question, for comparatively few of the cases are seen by a qualified medical man previous to decease.

Deaths in towns are debited against the town only if the deceased was resident there for three months or more prior to death. Chronic cases from the rural areas drift to the towns in the hope of getting more skilled treatment and even with a qualifying period of three months, a number of deaths must be debited against the towns which should be debited against the rural areas where the disease was contracted.

Population.

The population of the Federated Malay States as estimated at the end of June, 1927, was 1,504,823 distributed as follows:

Perak	664,680
Selangor	467,868
Negri Sembilan	209,113
Pahang	163,162

On the assumption that the races remained in the same proportion as in the census year the race distribution was as follows:

Europeans and Americans.	Eurasians.	Malays and other natives of the Archipelago.	Chinese.	Indians.	Others.
7,188	3,551	567,059	532,859	388,188	5,978

Births.

Forty-eight thousand and thirteen births were registered during the year, giving a birth-rate of 31.91 per mille of population as against 39,834 births and a birth-rate of 30.28 in 1926.

Deaths.

Forty-eight thousand three hundred and twenty-three deaths were registered, giving a death-rate of 32.11 per mille. The number of deaths in 1926 was 38,445 and the rate was 29.22.

The general death-rate for the four States was 32.11 per mille as against 29.22 for the whole of the Federated Malay States (Pahang excluded) for 1926; this increase was probably due in part to the effects of the floods.

The number of deaths attributable to fevers (most of them probably malaria) was 20,786 or 42.91 per cent. of the total. Last year the percentage was 48.

Dysentery and diarrhoea accounted for 7.15 per cent. of the total deaths, pulmonary tuberculosis for 4.16 per cent., pneumonia for 6.66 per cent. and convulsions for 11.08 per cent.

INFANT MORTALITY.

The number of deaths of children under one year was 9,752, giving an infantile mortality rate per thousand births of 203.11 against a mortality rate of 193.75 in 1926. The death-rates for the four States were:

States.	Deaths of children under one year.	Death-rate per 1,000 births.
Perak	3,687	181.33
Selangor	3,018	189.91
Negri Sembilan	1,448	229.62
Pahang	1,599	291.68
Total	9,752	203.11

PUBLIC HEALTH.

The general health of the country was not satisfactory during the year under review, the death-rate being 32.11 per mille as against 29.22 per mille for the previous year and 23.60 per mille for the year 1925. The outbreaks of cholera, plague, smallpox and beri-beri which occurred during the year contributed to this.

The increase in the death-rate was most marked in the State of Pahang, where it rose from 25.03 per mille in 1925 to 43.32 per mille in 1927. The records for 1926 were lost in the floods.

There is little doubt that this increase was largely due to the lowered vitality of the population resulting from the floods which occurred at the end of 1926 and in January, 1927, and to the destruction of vegetable gardens and padi crops causing an outbreak of beri-beri. Malarial fever due to seepage and residual water following the floods also caused many deaths. Every effort was made by the Health and Hospital Branches to deal with these effects of the floods, and the Institute for Medical Research issued large quantities of rice polishings extract, but it was impossible to control these diseases over large tracts of unopened country with communications broken down. The outbreak of beri-beri proves how very narrow the margin is amongst Asiatics between health and disease, and also how they immediately react to any interference with the vitamin contents of their food supplies.

In spite of all that can be done the population of all races are using more and more polished rice. It is easier to obtain, more pleasant to eat, and more easily cooked than the other forms of rice which either require husking before use, or when cooked are unpleasant both in taste and appearance to many people.

General European population.

The general health of the European population was good. The total European and American population as estimated at the end of December, 1927, was 7,188. There were 119 births, giving a birth-rate of 16.56 per mille and 35 deaths with a death-rate of 4.87 per mille as compared with a birth-rate of 19.86 per mille and a death-rate of 5.46 per mille for the previous year.

Malaria.

The total number of deaths attributable to fevers, probably mostly malarial, was 20,736, an increase of 4,205 over the figure for 1926. There were 49,452 cases treated in hospitals with 2,543 deaths and a death-rate of 5.13 as compared with 38,633 cases with 1,792 deaths and a death-rate of 4.64 for the year 1926 and 23,056 with 993 deaths in 1925. The year under review was like 1926 a bad malarial year. The raising of the normal sub-soil water level throughout the country due to the floods thereby increasing the number of mosquito breeding places and consequently the mosquito population, was probably the chief cause of this.

The distribution of quinine was actively carried out, and the Health Branch took all possible measures to cope with the prevailing conditions, but these were so universal and widespread that complete success was hardly possible, and all that could be done was to control the outbreak which but for the efforts of the staff would have been far worse.

Blackwater fever.

There were eight cases of blackwater fever with three deaths.

Pulmonary tuberculosis.

The number of cases of pulmonary tuberculosis treated in hospitals during the year under review was 2,413 with 1,118 deaths and a death-rate of 46.33 per mille as compared with 2,329 cases with 995 deaths and a death-rate of 42.72 per mille for the year 1926. The number of fatal cases remains high but is not alarming when it is realised that in the majority of cases patients only come into hospital to die. Extensive propaganda in the form of pamphlets and posters was continued by the Public Health Education Committee.

Local conditions are unsuitable to sanatorium treatment, and it is very difficult to induce patients to go any appreciable distance from their homes. Special wards for this disease will however be erected at the Decrepit Settlement at Sungei Buloh, now in the course of erection. Overcrowding in the towns and the sanitary conditions of the town houses are still unsatisfactory.

Yaws.

The treatment of yaws by arsenical compounds was continued. A total number of 24,078 injections were given during the period under review. The numbers of cases treated in each State in comparison with the number treated in 1924, 1925 and 1926 are shown in the following table:

States.	1924.	1925.	1926.	1927.
Perak	9,884 ...	9,155 ...	9,358 ...	2,307
Selangor ...	2,231 ...	1,305 ...	1,680 ...	2,504
Negri Sembilan	7,267 ...	6,426 ...	4,543 ...	4,465
Pahang	3,997 ...	9,403 ...	7,893 ...	3,913
Total ...	23,379 ...	26,289 ...	23,474 ...	13,189

The campaign against this disease was continued on previous lines but though the Malays, who form the vast majority of those affected, are very keen on the treatment, they still cannot be persuaded to continue treatment after the outward and visible signs of the disease have disappeared. The decrease in the number of cases is very largely due to the preventive work of the travelling dispensaries in the more accessible areas. The areas on the Perak and Pahang rivers are gradually being dealt with by the travelling dispensary motor launches.

Leprosy.

There were 480 fresh admissions and 80 deaths from leprosy during the year.

One hundred and four self-diagnosed cases voluntarily sought admission to the Kuala Lumpur Leper Asylum. In 1926 the number was 72. Admission is granted when the diagnosis of leprosy has been confirmed by the Medical Officer on clinical and bacteriological grounds: this precaution is necessary as the later lesions of syphilis and leprosy are occasionally somewhat similar and have been confused, especially by the Chinese.

A large proportion of the lepers at present seeking admission, or sent by hospitals, are in the early stages of the disease. Previously, the asylum was sought mainly as a last resort by far advanced lepers often horribly mutilated and mostly very infective.

Illustrated and other pamphlets on leprosy were widely distributed by the Committee for Public Health Education during the year.

The latest forms of treatment are being carried out and special investigations into the disease are in the hands of the Institute for Medical Research.

A new Federal Leper Settlement is in course of erection at Sungei Buloh.

Cancer.

An investigation into the incidence of cancer among the inhabitants of Malaya is being carried out at the Institute for Medical Research at the request of the Ministry of Health. Statistics are being collected, and a report will be issued in due course.

Cholera.

One hundred and fourteen cases of cholera occurred in Perak with 74 deaths. There were three distinct outbreaks, the first occurring early in June on estates in the Batang Padang area of Lower Perak, and at Sitiawan. A further outbreak occurred in North Perak in July and the most serious outbreak commenced on 18th August, 1927, and lasted for three weeks. In this outbreak which occurred on the Perak river between Parit and Teluk Anson there were 57 cases and 40 deaths. Anti-cholera vaccination was carried out in as wholesale a manner as possible in the infected areas, while pamphlets giving warnings and instructions printed in the vernacular were lavishly distributed. The motor launch belonging to the Medical Department at Teluk Anson proved of great value in this outbreak, as many cases occurred in the riverine kampongs.

It is believed that the disease was originally imported by carriers from India.

Plague.

Thirty-three cases of plague were reported with 30 deaths during the year. The majority of these cases occurred in and around Ipoh. The usual precautions were taken. How the first infection was introduced was not definitely established but it is thought extremely probable that infected fleas were imported with either Siamese or Indian rice. Clinical observations by the Medical Officer, Ipoh, tended to confirm this theory. Anti-rat measures were carried out by trapping and poisoning and this is being continued. There was no rat mortality and only one rat trapped was found to be plague-infected.

Typhus fever.

Eighty-four cases of tropical typhus were diagnosed at the Institute for Medical Research during the year.

The investigations into this disease continue at the Institute.

Smallpox.

There were 237 cases of smallpox with 24 deaths; 170 with four deaths in Selangor and 63 with 20 deaths in Negri Sembilan; Perak recorded three cases and Pahang one.

In Negri Sembilan the cases occurred in March, April and May. In Selangor, the Kuala Lumpur and Ulu Langat districts were chiefly affected, two epidemics occurring in May and August, but the disease was apparently of a much milder form than the earlier outbreak in Negri Sembilan. Considerable difficulty was experienced in tracing out cases and contacts and preventing them from leaving infected areas. Prosecutions were made in several cases under the Quarantine and Prevention of Disease Enactment and heavy fines were inflicted in the Courts. Leaflets, giving details of these and assuring the public that it was to their own interest to report cases early and to assist the Government, were published in various languages and distributed in great numbers.

The number of vaccinations performed was 269,509 as compared with 113,914 performed last year. They were distributed as follows:

States.	1924.	1925.	1926.	1927.
Perak	54,278	... 86,125	... 88,539	... 106,865
Selangor ...	11,745	... 26,369	... 14,256	... 65,091
Negri Sembilan	6,563	... 8,268	... 5,392	... 64,639
Pahang ...	5,821	... 5,543	... 5,727	... 32,914
Total ...	78,407	... 126,305	... 113,914	... 269,509

The incidence of the disease amongst vaccinated children gave the impression that the Hong Kong lymph was not affording adequate protection, and Java lymph was substituted with complete success. In 1929 the department hopes to prepare its own vaccine lymph.

Beri-beri.

The number of cases of beri-beri treated was 2,782 with 447 deaths and a death-rate of 16.07 as compared with 1,075 cases with 140 deaths and a death-rate of 13.02 for the corresponding period of 1926.

There was a very marked increase in the number of cases treated in Pahang—due to the exceptional conditions in the State resulting from the floods: the cases came chiefly from the railway construction areas north of Kuala Lipis and the mining areas in the Bentong, Raub and Kuantan districts.

Venereal. diseases.

The total number of cases of venereal disease treated in hospitals during the year was 5,236 with 74 deaths and a death-rate of 1.41 per mille as compared with 4,428 cases with 51 deaths and a death-rate of 1.15 for the previous year. In addition, 20,508 cases were treated in clinics and treatment centres.

As in the previous year, considerable progress has again been made in combating venereal diseases, new treatment centres have been opened, which were well attended, and there has been an increase of attendance at the old centres.

This satisfactory progress may be attributed to the propaganda work which has been carried out, and to the careful selection and special training given by the Venereal Disease Specialist to the staff appointed to the different clinics.

Injections of arsenical compounds are given at all hospitals and dispensaries.

The increase in the numbers treated for syphilis has no doubt some bearing on the reduction in the number of mental patients admitted to the Central Mental Hospital for general paralysis of the insane.

INFANT WELFARE WORK.

Infant welfare work continues with great success and the attendances at the clinics have greatly increased. The numbers attending clinics in Kuala Lumpur, Ipoh, Taiping and Seremban for 1926 and 1927 were as follows:

Place.	1926.	1927.
Kuala Lumpur	29,831	33,979
Ipoh	14,080	16,796
Taiping	13,559	28,061
Seremban	3,895	13,640
Total	61,365	92,476

It is very gratifying to record a large increase in Malay attendances: in Kuala Lumpur alone they increased from 4,464 in 1926 to 10,833 in the year under review.

Each centre is under the charge of a Lady Medical Officer and specially trained Infant Welfare Sisters and has also a staff of Asiatic Health Visitors who work part time visiting in the district.

These centres do very excellent anti-natal work, and also serve as outdoor dispensaries for women and children. The numbers attending increase yearly and many patients seeking advice or treatment come from great distances. It is noteworthy that the infantile mortality figures of the four large towns are substantially reduced this year. In Seremban the infantile mortality rate was 147.30 as against 209.33 for the previous year.

INSPECTION OF SCHOOLS.

The medical inspection of schools was carried out as far as possible with the staff available. Practically every school was inspected at least once during the year. In Selangor the schools which were on the itinerary of the travelling dispensaries were visited more frequently than once a month and treatment was given for all minor ailments.

Towards the end of the year a Lady Medical Officer with considerable experience in school work was specially detailed for the inspection of girls' schools.

The inspections were carried out on the same lines as the routine medical inspection of school children in England, special attention being given to examination for conditions common in the tropics. Special printed cards were designed and the condition of each child was recorded on a separate card.

It is hoped, when the Medical Inspectors of Schools have been appointed, to be able to extend this systematic inspection of school children. Four Medical Inspectors of Schools have been approved for 1928.

PUBLIC HEALTH EDUCATION.

The Public Health Education Committee met on several occasions during the year: at the Horticultural Shows exhibitions were put up which were well attended, lectures were given and pamphlets which had been prepared by the Committee were distributed in large numbers in various languages.

At the Malayan Exhibition held in Kuala Lumpur from 29th July, 1927, to 1st August, 1927, exhibits on anti-malaria measures and other public health subjects were shown by the Malaria Advisory Board in conjunction with the Committee for Public Health Education, the Infant Welfare Advisory Board, the Institute for Medical Research and the Specialist on Venereal Diseases. The Acting Malaria Research Officer and his staff spent considerable time on these exhibits and supplied a good deal of the material.

The exhibits were housed in a large building forming two sides of a square, one side being wholly taken up by the Infant Welfare exhibit and the other by exhibits on malaria, social hygiene, beri-beri, Japanese river fever, anti-rabic treatment, hookworm, trachoma, yaws and general public health matters. Officers of the various branches were in attendance to explain the various exhibits and answer the great number of questions asked.

The exhibition was opened for four days, and as it happened to be held during the August holidays, a large number of visitors than usual from various parts of the country came to see the exhibition. The official attendance for the four days of the exhibition was approximately 59,600 and at times the Medical and Health Sections were so crowded that people had difficulty in getting into the building.

Popular lectures on malaria were given in Malay and Chinese in various parts of the country, these were illustrated by lantern slides and were well attended.

A cinematograph film of work done at the Infant Welfare Centre, Kuala Lumpur, was also exhibited at the Horticultural Shows in Kuala Lumpur and Telok Datoh and on several other occasions to large and interested audiences of various nationalities.

Lectures on venereal diseases, illustrated by lantern slides, were given in Chinese, Tamil and other clubs and institutions.

QUARANTINE AND PORT HEALTH WORK.

A total of 80,399 immigrants passed through the Quarantine Camp, Port Swettenham, during the year 1927 as compared with 99,066 for the year 1926. Improvements were made in the Camp, whereby absconding was made more difficult.

During the year 64 ships with immigrant labourers were boarded and inspected. Of the 64 ships, 16 were infected—one with cholera, two with smallpox, two with cerebro-spinal meningitis, one with cerebro-spinal meningitis and chicken-pox and ten with chicken-pox.

The number of immigrants who entered the Quarantine Station, Port Swettenham, was 80,399, the number remaining on 31st December, 1926, was 1,697, making a total of 82,096. The largest number on any one day was 7,649 on the 14th of July. The daily average of immigrants in the Camp was 2,241. The following table shows how these immigrants were distributed:

Discharge to Depôt	80,298
Transferred to Klang Hospital	61
Absconded from the Quarantine Camp ...	58
Died in hospital and cholera wards	260
Remaining on 31st December, 1927 ...	1,419
Total ...	82,096

MEDICAL INSTITUTIONS.

There were on the 31st December, 1927, in the Federated Malay States, the following medical institutions:

4 European Hospitals;
34 District Hospitals (each with an Outdoor Dispensary);
3 Women's Hospitals;
3 Leper Asylums;
5 Gaol Hospitals;
1 Quarantine Camp;
4 Vagrant or Decrepit Wards;
1 Mental Hospital;
1 Pasteur Institute (attached to the Institute for Medical Research);
30 Dispensaries working in towns, distinct from hospitals;
4 Infant Welfare Centres;
4 Venereal Diseases Clinics.

The number of in-patients treated in hospitals was 142,094 with 11,743 deaths and a death-rate of 8.26 as compared with 127,382 with 9,178 deaths and a death-rate of 7.21 in 1926.

During the year nursing by female Asiatic Nurses, under the supervision of European Sisters, was introduced into the first and second class male Asiatic wards of some of the larger hospitals. The results are apparent in the improved appearance of the wards and the increased comforts of the patients. It is hoped to extend the system as more nurses and more accommodation for them become available.

The work in the Women's Hospitals and wards continues to increase. It is very gratifying to note the increase in the number of Malays attending at the Kuala Kangsar Women's Hospital as out-patients where it exceeded by far that of other nationalities. The willingness of the Royal Malays to be admitted to the hospital has had a great influence on the other Malays. The daughter of His Highness the Sultan of Perak was a patient in the hospital in October.

The number of out-patients treated in all hospitals, dispensaries, travelling dispensaries and dispensary boats for 1927 was 789,764 as compared with 630,052 in 1926 and 584,261 in 1924.

Of the total of 789,764 cases, 170,267 were treated by the travelling dispensaries and 40,665 by dispensary boats on the Perak and Pahang rivers.

During the year under review a larger and improved type of travelling dispensary was supplied.

Motor dispensary boats were supplied for the Pahang and Perak rivers. They have done very useful service in reaching the riverine population and distributing medicines in the kampongs on the river banks and have justified their purchase. The Perak river boat proved invaluable in the cholera outbreak in Lower Perak.

Mental diseases.

There were at the end of 1927, 1,316 male and 386 female patients at the Central Mental Hospital.

The total admissions during the year were 900, an increase of 165 on last year, while the discharges numbered 414 as against 360 last year and 276 in 1925. Of these, 292 were discharged recovered and 67 as relieved. The balance of 55 was made up of one "not insane" and 54 who were discharged "unimproved" under bond.

The reduction in admissions for general paralysis of the insane is significant. In 1925 there were 68 cases and in 1927, 35 cases. There appears to be no doubt that anti-venereal work is having a beneficial effect.

Pasteur Institute.

The Pasteur Institute continued to do good work and 70 cases received anti-rabic treatment. Of these cases, 21 had been bitten by animals proved rabid by laboratory examination, three had been bitten by animals certified rabid by a medical or veterinary officer, four had been bitten by animals having a history highly suggestive of rabies, 34 had recent abrasions contaminated by the saliva of proved rabid animals, and six had had similar contamination of recent abrasions by the saliva of animals thought to be rabid, but which were untraceable.

Nineteen Europeans, five Eurasians, three Malays, ten Chinese and 33 Indians underwent treatment: no deaths occurred.

IX.—EDUCATION.

Financial.

The expenditure upon Education (including $1,129,274 spent by the Public Works Department on the building and upkeep of schools) was $3,833,578. Of this sum, $457,536 was paid in grants to English aided schools and $56,036 in grants to Chinese vernacular schools.

The total revenue, derived mainly from school-fees, was $147,686.

Staff.

Four European Masters were recruited for the Federated Malay States.

At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 43 and the female 4. This included administrative and teaching staff.

In no previous year has the European staff of the department been so large, though there are still vacancies to be filled to allow for the increasing number of officers lent to the Unfederated Malay States and for officers on leave. With the opening of Raffles College more local teachers should be qualified to take over secondary work.

Higher education.

At present the highest local educational institution open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore.

The building of Raffles College, which will provide a higher education in subjects other than medicine, neared completion and the College will open in June, 1928.

The Malay College, Kuala Kangsar, receives probationers for the Government service.

During the year it was decided to institute a School of Agriculture at Serdang, with a view to providing practical and scientific courses in agriculture.

Evening classes.

Evening classes were held in all the States. In Perak and Negri Sembilan again the only classes in demand were those for elementary English. In Kuala Lumpur the curriculum comprised English, shorthand, book-keeping, typewriting, mathematics, machine drawing, magnetism and electricity, electrical engineering, workshop mechanics, surveying, engineering and art. Of the students who joined these Kuala Lumpur classes, many were apprentices in Government workshops. In Pahang there were classes in English, arithmetic and typewriting.

There were Normal Classes for teachers in all the States except Pahang, where correspondence classes take their place.

Scholarships and free education.

Of the 15,702 pupils in English schools, 405 held Government scholarships, enjoying free education, board and lodging; 25 held other scholarships; 2,832 received free education from the Government and 279 free education from other sources. Thus, 3,541, or 25.44 per cent., receive a free education.

All pupils in Malay vernacular schools enjoy free education.

English schools.

There were 22 English Government schools for boys, 13 English grant-in-aid schools for boys and 12 for girls. The total average enrolment was 5,952, 6,417 and 3,332 respectively.

Malay College, Kuala Kangsar.

The expenditure on the Malay College, Kuala Kangsar, was $85,012. At the end of the year there were 129 students, all boarders educated and maintained entirely at Government expense.

One boy died during the year. The general health of the boys was satisfactory.

Cricket, hockey and association football are played regularly.

There were 54 Cadets and 75 Scouts. The camp for both units was cancelled owing to an outbreak of chicken-pox.

Sultan Idris Training College.

At the beginning of the year there were 331 students and two probationers in residence at the Sultan Idris Training College for the training of Malay vernacular teachers. After the fasting month 93 students and two probationers completed their course and left and 125 new students and three probationers joined.

The total expenditure was $142,754, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. The cost of educating a student was $369 a year.

The curriculum comprises the Malay language and literature, Malay history, geography, the theory and practice of teaching, hygiene, physical training, rural science, handiwork and religious instruction. A few students learnt music.

The strength of the two College platoons in the Malayan Volunteer Infantry was 150.

Malay vernacular education.

The Malay vernacular schools are all Government institutions and provide free education. There are 408 schools for boys and 72 for girls with average enrolments of 27,806 and 3,492. The Malay teaching staff numbers 1,345.

The teacher trained at Sultan Idris College takes a keener interest than the older type of teachers in school gardening, while the scientific study of his own language and history, arithmetic and geography has given him a modern mind. Of the value of the work done by the Malay vernacular schools there is no doubt. They teach nothing to distract the Malay villager from the pursuits of his independent agricultural life.

Tamil vernacular schools.

There are 299 Tamil vernacular schools with an average enrolment of 10,909. Estates continued to build and equip new schools. It was still difficult to recruit trained and efficient teachers.

During the year a European Officer with a knowledge of Tamil was detailed to report on these schools. His report, when ready, should provide data for systematising and improving instruction in these schools.

Chinese vernacular schools.

Three hundred and fifty-three Chinese schools were registered with 764 teachers and 18,924 pupils.

Grants were paid to 59 schools.

The standard of sanitation in these schools is now fairly satisfactory.

The evening training class for Chinese teachers was continued at Kuala Lumpur. There were 28 students in three classes.

There is only one Government Chinese school.

A series of readers and a Chinese school geography were nearly completed. Manuals on arithmetic and hygiene are contemplated.

Technical education.

The Trade School at Kuala Lumpur trains mechanics for motor engineering work. There were 36 students. The practical aptitude of the Malay students is most gratifying.

A Trade School at Bagan Serai trains students in carpentry and furniture-making. The average enrolment was 47 and the cost per head $142.

The provision of additional Trade Schools will be considered.

X.—LANDS AND SURVEY (INCLUDING GEOLOGY).

Area under title.

The area in private occupation at the end of the year amounted to about 2,433,635 acres under agricultural titles, and 199,524 acres under mining titles.

It is estimated that, of the 27,623 square miles covered by the four States of the Federation, 14.9 per cent. is land in private occupation, 19.7 per cent. is forest reserve and 65.4 per cent. is still State land, including land reserved for other purposes than forests.

Land revenue.

The land revenue (including $2,690,210 derived from Land Sales) amounted to $7,559,954 as compared with $6,199,206 (including $1,691,367 derived from Land Sales) collected in 1926.

Cost of the Survey Department.

The cost of the Survey Department, Federated Malay States, is summarised as follows:

	Expenditure.	Revenue and reimbursements.	Nett cost.
1927	$1,708,259	$653,881	$1,054,378
1926	1,581,943	494,124	1,087,819
1925	1,450,393	374,506	1,075,887

Revenue Survey Branch.

The earnings of the Revenue (or Titles) Survey Branch, as determined by the application of the schedule of fees to work actually completed during the year, amounted to $526,754 or 60 per cent. of the total expenditure of the Branch. The corresponding figures for 1926 were $405,000 and 50 per cent.

Training and recruiting.

Recruiting proceeded vigorously and training methodically. The training period both for field and office apprentices is four years. Experience has shown that it is unwise to cut this down by more than one year even for the most promising recruits. Consequently it will be some time before the full effects of recent recruiting are felt. The systematic effort to improve efficiency has been maintained and, in addition to inspections, the whole subordinate field staff was assembled in camp for a month's intensive training. The results of this camp and of the regular classes held for members of the office staff were most encouraging.

Topographical.

The Topographical Branch carried out surveys on the standard scale of one mile one inch in Kedah and Pahang covering 1,163 square miles and on a scale of four inches one mile in Penang covering 51 square miles. Forest reserves with an area of 97 square miles were surveyed on a four inches to a mile scale and at Cameron's Highlands five square miles were completed on a ten-inch to one mile scale. In addition, the large scale detailed surveys of Kuala Lumpur and Ipoh were continued. The progress made was satisfactory, adequate labour being available for the first time for several years.

Trigonometrical work was confined to some revision in Perak and to the fixation of control points in Pahang in advance of the topographers. Pressure of work in other branches prevented any progress being made with the programme of precise levelling.

Maps.

The Map Production Branch, which worked at full pressure during the year, fully maintained the high quality of its publications. One of the most striking features of the year was the very large increase in the demand for maps by the public, while the production of forest maps from air photographs constituted a new departure.

Meteorological.

Responsibility for the direction of meteorological activity was assigned to the Surveyor-General, Federated Malay States and Straits Settlements, at the beginning of 1927. As a preliminary to scientific investigation and a systematic study of the climate of Malaya a scheme of development was submitted to and accepted by all Governments concerned. The proposals involve the establishment of groups of "second order" stations down each coast and along the centre of the Peninsula. At these stations determinations of barometric pressure, temperature, humidity, rainfall, wind direction and velocity, the amount and type of cloud and the duration and intensity of thunderstorms will be recorded. In addition it is hoped to establish a large number of stations at which temperature and rainfall data will be collected with the co-operation of the planting community.

The organisation outlined should provide a foundation on which can be built eventually a separate Meteorological Department capable of dealing comprehensively with the needs of aviation, upper-air research work and, following the organisation of the distribution and exchange of information with neighbouring countries, weather prediction.

The work accomplished during 1927 includes the selection and acquisition of station sites, the ordering of essential instruments and the recruitment and partial training of a proportion of the subordinate staff which will be required.

Two stations were established in Kedah near the centre of the path of totality of the 1929 Solar eclipse for the purpose of recording the meteorological data necessary for the selection of the most suitable observatory sites for the various scientific expeditions requiring them.

Climatological and meteorological summaries of the records of the stations established at Cameron's Highlands, Fraser's Hill and Kuala Lumpur and of the various temperature and rainfall stations have been printed and distributed to the Air Ministry and the Meteorological Offices of neighbouring countries. With the co-operation of the Marine Department special arrangements were made for enlarging the scope and extent of the observations of thunderstorms with a view to determining the degree to which they might close the Straits of Malacca to airships.

General.

A report on Trengganu surveys was supplied by the Surveyor-General at the request of that Government. It completes the series presented to the Governments of the Unfederated Malay States. The visits made for the purpose of these reports have been of value in many ways but principally in that they have kept officers of the head-quarters staff in touch with seconded officers, and have led to a uniformity in technical methods throughout Malaya together with a knowledge and appreciation of recent developments which would not otherwise have been obtained.

A report was also furnished at the request of the Government of British North Borneo on the surveys and the organisation of the Survey Department in that State.

GEOLOGY.

The rough geological survey of Johore was completed, and continued progress was made in Trengganu. A book on the Geology of the Malayan Ore Deposits was prepared by Mr. J. B. Scrivenor, Director of the Geological Survey, to be published early in 1928.

publishing company, inc.

An independent opinion on the geology of Kinta was obtained by engaging Dr. R. H. Rastall to come out for a few months, and his report was laid before the Federal Council. His scientific results were published in journals in England. His work is extremely valuable as having settled the controversy on this subject, and future work will be based upon his results.

XI.—LABOUR.

General.

The majority of labourers in the Federated Malay States are Chinese and Southern Indians. The latter are chiefly engaged in agricultural work and on public services: the former in agriculture and every other form of manual labour. Skilled work is almost entirely in the hands of the Chinese.

In addition there are about 4,550 Javanese labourers, immigrants from the Netherlands East Indies. This class of labour is recruited mainly for the Kuala Lipis and Kuantan districts of Pahang. One thousand seven hundred and thirteen of these labourers are employed on contracts of service for 900 days' work entered into in Java. This is the only form of indentured labour in the Federated Malay States. All other labourers of all races are at liberty to leave their employment at any time on giving a month's notice.

Conditions of labour are governed by the provisions of the Labour Code, 1923, and by the Netherlands Indian Labourers' Protection Enactment, 1927. These Enactments are administered by a Labour Department under the direction of the Controller of Labour, Malaya. Officers of the Chinese Protectorate are appointed Deputies or Assistant Controllers of Labour to deal with questions of Chinese labour.

Standard rates of wages, namely, 58 cents a day for men and 46 cents a day for women, were prescribed for Southern Indian labourers in the Raub, Lipis, Bentong and Temerloh districts of Pahang under section 141 of the Code. These rates came into force on the 1st of August, 1927. In other parts of the Federated Malay States, Indian labourers earn from 45 cents to 60 cents (men) and from 35 cents to 50 cents (women). Javanese and Malays earn from 50 to 60 cents a day and Chinese who are usually employed on contract (i.e., piece work) from 80 cents to $2.10 a day according to the nature of employment.

The estate population for the past five years is shown in the following table:

—	1923.	1924.	1925.	1926.	1927.		Total.
					Males.	Females.	
Indians (of Madras Presidency) ...	121,463	119,242	137,761	176,114	114,770	57,696	172,466
Chinese ...	31,957	30,884	37,879	61,064	40,137	4,102	44,239
Javanese ...	4,791	4,516	4,165	4,760	3,478	1,072	4,550
Others ...	4,894	4,715	4,549	4,822	3,426	537	3,963
Total ...	163,105	159,357	184,354	246,760	161,811	63,407	225,218

Health.

Health conditions on estates generally have not been unsatisfactory.

The mortality among Indian labourers differed little from that among labourers of other races, the death-rate per mille amongst labourers of all races on estates being 17.48 and amongst Indian labourers 17.44.

Under the Health Boards Enactment, which came into force on 1st January, 1927, a Central Health Board has been constituted which is empowered to collect an annual cess or cesses for the purpose of carrying out health measures in other than Sanitary Board areas and by the end of the year Local Boards under the control of the Central Board had been formed in all States except Perak and had begun to function. In order to co-ordinate the work of the Boards with the Labour Code the Controller of Labour is appointed ex-officio President of the Central Board. It is hoped that the supply of additional hospitals, the extension of medical supervision to all estates and the preparation of schemes for the improvement of unhealthy areas will by these means be facilitated.

Immigration.

Chinese immigration is uncontrolled and takes place mainly through the ports of the Colony. The number of Chinese deck passengers arriving in the Colony reached the record figure of 359,262, while the number returning to China was 155,198. Large numbers of these immigrants proceeded to the Federated Malay States but in spite of this large influx there was little unemployment. Labour discharged from rubber estates was soon absorbed in other forms of employment.

The immigration of labourers from Southern India is regulated by the Indian Immigration Committee (of which the Controller of Labour is ex-officio Chairman) appointed by the High Commissioner.

The railway fares in India, steamer passages and transport expenses of such labourers to their places of employment are paid from the Indian Immigration Fund.

The number of labourers so assisted who arrived in Penang during 1927 was 123,826 compared with 149,414 in 1926. These "assisted labourers" consisted of 104,382 adults and 19,444 minors. Of the adults, 76,937 were men and 27,445 women: the number that proceeded to places of employment in the Federated Malay States was 77,863 compared with 99,660 in 1926.

The Indian Immigration Fund.

The income of the Indian Immigration Fund is derived from a quarterly assessment levied on all employers of South Indian labour throughout Malaya based on the number of days' work done by such labourers during the quarter.

With a view to increasing the number of female immigrants a differential rate is levied on male and female labourers. The rate of assessment was fixed at $5 for males and $4 for females for the first and second quarters and at $4 for males and $3 for females for the third and fourth quarters of 1927, in respect of every 72 days' work done.

Repatriation

During 1927, 7,786 adult and 1,821 minor decrepit or destitute Indians were assisted with passages from Malaya back to India. Of these, 3,963 adults and 1,069 minors were from the Federated Malay States.

Amongst those repatriated at the expense of the Indian Immigration Fund, 1,135 adults and 516 minors had been inmates of the Home for Decrepit Indians, Kuala Lumpur, maintained by the Immigration Committee.

XII.—MISCELLANEOUS.

Legislation.

During the year 1927, 27 Enactments were passed, of which 14 were amending Enactments and 13 consolidating or new Enactments. The more important amending Enactments were the Companies Amendment, which authorises companies to keep branch registers outside the Federated Malay States, the Excise Amendment, which by a control of the manufacture of liquor is designed to prevent the disposal of illicitly manufactured liquor, the Rubber (Restriction) Amendment, which prevents an accumulation of export rights, and the Mining Amendment, which authorised the imposition of conditions on a prospecting licence and ensures that the licensee should do his own prospecting and not evade his obligations by transfer. The most important principal Enactments passed during the year were the Town Planning Enactment, the Carriage of Goods by Sea Enactment and the Societies Enactment.

The Town Planning Enactment repealed the Town Planning Enactment of 1923, the failure of which was due to its complexity. The new Enactment makes the Sanitary Board the town planning authority and provides that the town plan now shall be limited to the main lines of communication, zones and open spaces. It does not deal at all with improvement schemes: a further Enactment will be considered in due course to deal with these.

The Carriage of Goods by Sea Enactment was passed following the Colonial Ordinance and the English Carriage of Goods by Sea Act, 1924, and consequently calls for no comment.

The most important provision in the Societies Enactment authorises the Resident to refuse registration of a benefit society if the proposed scheme of benefits appears financially unsound. It also authorises the Registrar to require any society to furnish accounts audited by an approved auditor. Where such accounts are not furnished or where the financial position seems unsound the society may be dissolved. A dissolved society must either register as a company or co-operative society in which case its accounts will still be subject to audit, or wind up its business.

The Machinery Enactment did not introduce any novel provisions and the Netherlands Indian Labourers' Protection Enactment did little more than re-enact the State Enactments as a federal measure.

None of the other Enactments passed call for special remark.

PLANTERS' LOANS BOARD.

Planters' Loans.

On 1st January, 1927, the Planters' Loans Board had outstanding as "Planters" loans to four companies ($288,500) and to eleven individuals ($124,800) the sum of $413,300. It lent in new loans (nine) during the year a further $154,900, while five properties repaid their loans in full amounting to $177,100 and four other properties made partial repayments amounting to $21,700.

At the end of the year, the "Planters" loans outstanding were $369,400 to four companies ($165,000) and fifteen individuals ($204,400).

Building Loans.

Under the extended powers given to the Board by Enactment No. 6/1926, the Board, during the course of the year, dealt with 89 enquiries and applications for loans for building purposes amounting in the aggregate to $2,669,950.

In 21 instances the applicants either did not proceed with their applications or withdrew them; 20 applications could not, for various reasons, be entertained by the Board, while five were still under consideration at the end of the year.

In all, 33 applications amounting to $802,500 were definitely approved but up to the end of the year only 20 applicants had availed themselves of their loans amounting to $403,000.

One borrower repaid his loan in full, $20,000, while partial repayments (three) amounted to $1,625.

At the end of the year, the Board had actually outstanding 19 building loans amounting to $381,375.

War Service Loans.

Under the War Service Land Grant Scheme, at the beginning of the year, 103 ex-soldiers were benefiting by approved loans amounting to $2,513,000.

No new loans were made during the year, while ten beneficiaries repaid their loans amounting to $250,000.

Interest.

Interest earned during the year amounted to $133,114, of which $37,553 was in respect of "Planters" loans, $2,893 in respect of "Building" loans and $92,668 in respect of "War Service" loans.

Interest collected totalled $202,362. Of this sum, $125,127 was paid into Federal revenue and $77,235 credited to the revenue of the Board.

Profit and loss.

The Board's profit on the year's working amounted to $37,627.

Reserves.

The General Reserve Fund of the Board stands at $525,000, while two special reserve funds of $50,000 and $40,000 respectively have been created, giving a total sum in reserve of $615,000.

General.

The capital of the Board is $4,000,000 created by "The Planters Loans Fund Enactment, 1915".

PUBLIC TRUSTEE.

The year under review was the fifth year of the working of the Department of the Public Trustee.

The duties of the Public Trustee are:

(*a*) to act in the administration of estates of small value;
(*b*) to act as an ordinary trustee;
(*c*) to act as a trustee appointed by the Court.

During the year the Public Trustee accepted 30 trusts in all as compared with 18 in 1926 and 6 in 1925.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at about four million dollars.

VOLUNTEERING.

Recruiting.

During the year under review the strength of the Malay States Volunteer Regiment increased from 1,132 to 1,428, 416 recruits being obtained. This was most satisfactory as it brought the regiment to within measurable distance, for the first time in its history, of being up to establishment.

Equally satisfactory was the decrease in the average age of the members of the regiment, the number of men under 30 increasing from 465 to 583.

Efficiency.

Efficiency showed great improvement, the figure of 100 per cent. efficient being reached by 14 different platoons and two whole companies, viz., "C" Company in Perak and "E" Company in Negri Sembilan.

Training.

Progress was made in all branches of training, the figure of merit for musketry rising from 60.3 to 65 and the number of first class Lewis gunners rising from 63 to 141.

Two hundred and eighty-one volunteers went through the course at the School at Port Dickson as compared with 205 in 1926.

Malayan Volunteer Infantry.

The progress of the Malayan Volunteer Infantry units was, on the whole, normal.

The Selangor Malayan Volunteer Infantry obtained good results at rifle meetings, attaining to second place in the Warren Shield Competition, open to all regular and volunteer units in Malaya, for the second year in succession.

GENERAL.

His Excellency Sir Laurence Guillemard, G.C.M.G., K.C.B., who had been High Commissioner for the Federated Malay States over a period of seven years, retired in May.

The early stages of his period of office were marked by a serious world-wide trade depression which involved both the tin and rubber industries. The country, however, made a wonderful recovery: the period of depression was followed by years of unequalled prosperity and at the time of Sir Laurence's retirement the Federation was, generally speaking, in a very strong financial position, though it cannot be denied that the rubber industry, still subject to measures of restriction, gave cause for some anxiety.

He was succeeded in June by His Excellency Sir Hugh Clifford, M.C.S., G.C.M.G., G.B.E., who had spent a considerable period of his early Colonial service in Malaya. Sir Hugh's pleasure at returning to the scene of his former labours was only equalled by that of all the communities in Malaya in welcoming him back. It was felt that his unrivalled knowledge of the country and his deep sympathy with all its peoples were inestimable assets.

During the short period between Sir Laurence Guillemard's departure and Sir Hugh Clifford's arrival Mr. W. Peel, C.M.G., Chief Secretary to Government, Federated Malay States, was Officer Administering the Government of the Colony and High Commissioner for the Malay States.

A visit was made to the States by the Flagship of the First Cruiser Squadron, China Station, H.M.S. "Frobisher", accompanied by H.M.S. "Dauntless".

His Majesty the King was graciously pleased to confer the following honours:

Knight Grand Cross of the Most Distinguished Order of St. Michael and St. George	Sir Laurence Guillemard, High Commissioner.
Companion of the Most Distinguished Order of St. Michael and St. George...	H. W. Thomson, British Resident, Perak.
Imperial Service Order ...	C. J. Perkins, Assistant Surveyor-General, Federated Malay States and Straits Settlements.

The new Certificate of Honour approved by His Majesty the King as a recognition of loyal and valuable services rendered to the Government of the Federated Malay States was awarded to the following on the occasion of His Majesty's birthday:

H. L. Velge;
Raja Mahdi bin Husin;
Towkay Chung Thye Phin, J.P.;
Syed Ahmad bin Syed Alwi;
Raja Ali bin Raja Haji Ja'afar;
Raja Chik ibni Yam Tuan Radin, Tunku Muda of Sri Menanti.

WILLIAM PEEL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
10th May, 1928.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	356,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.
* As now corrected. ‖ Excluding bullion and specie.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927

‖ Excluding bullion and specie. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. † The figures for previous years included items now omitted owing to reclassification of revenue.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1927.

Dr.	$ c.	$ c.	$ c.	*Cr.*	$ c.
To Loan Expenses—				**By Loan Subscriptions—**	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamps, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	20,379,955 48				
Posts and Telegraphs Department	2,380,848 81				
Topographical Survey Department ...	763,402 66				
Topographical Survey of Forest Reserves ...	67,063 83				
Railway—Open Lines	5,305,641 26				
„ Construction	34,384,947 37		63,281,859 41		
To Balance ..	...	...	11,015,690 19		
			$80,185,714 29		$80,185,714 29

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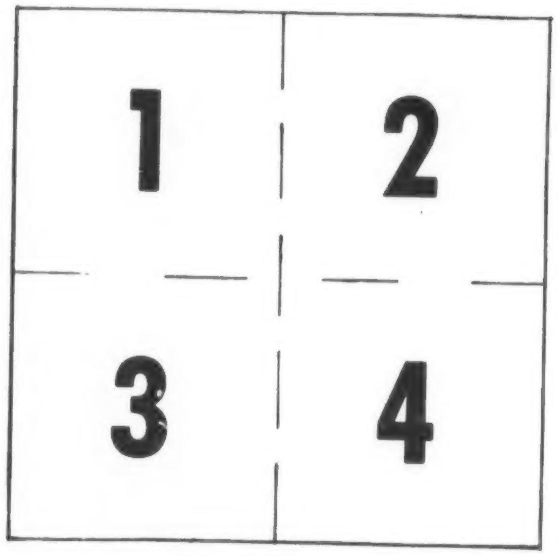
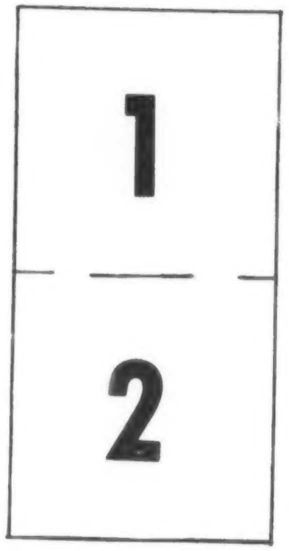
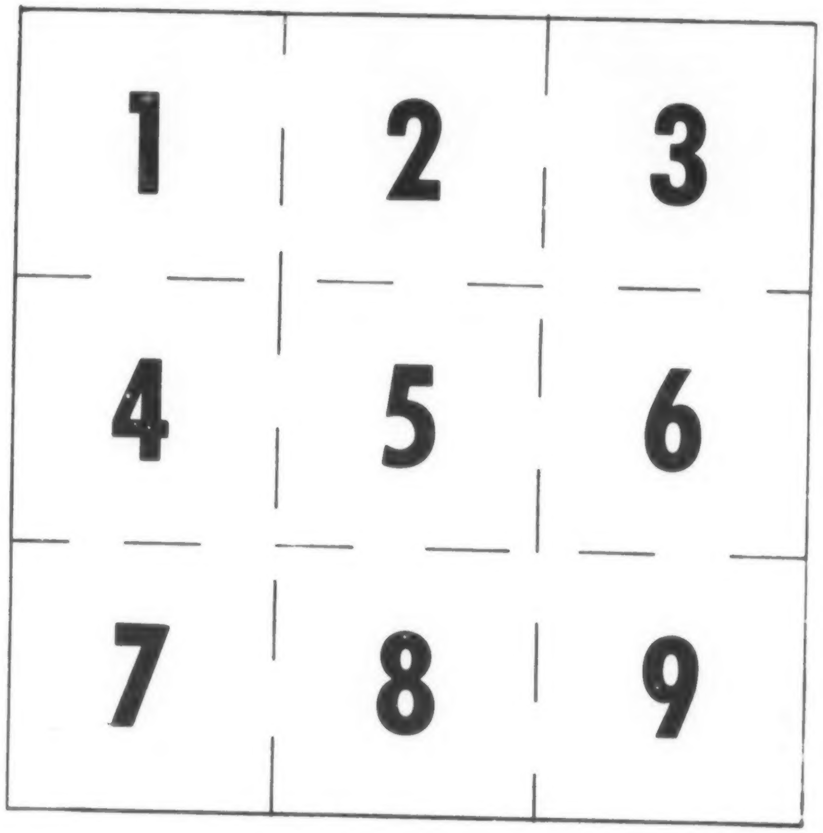
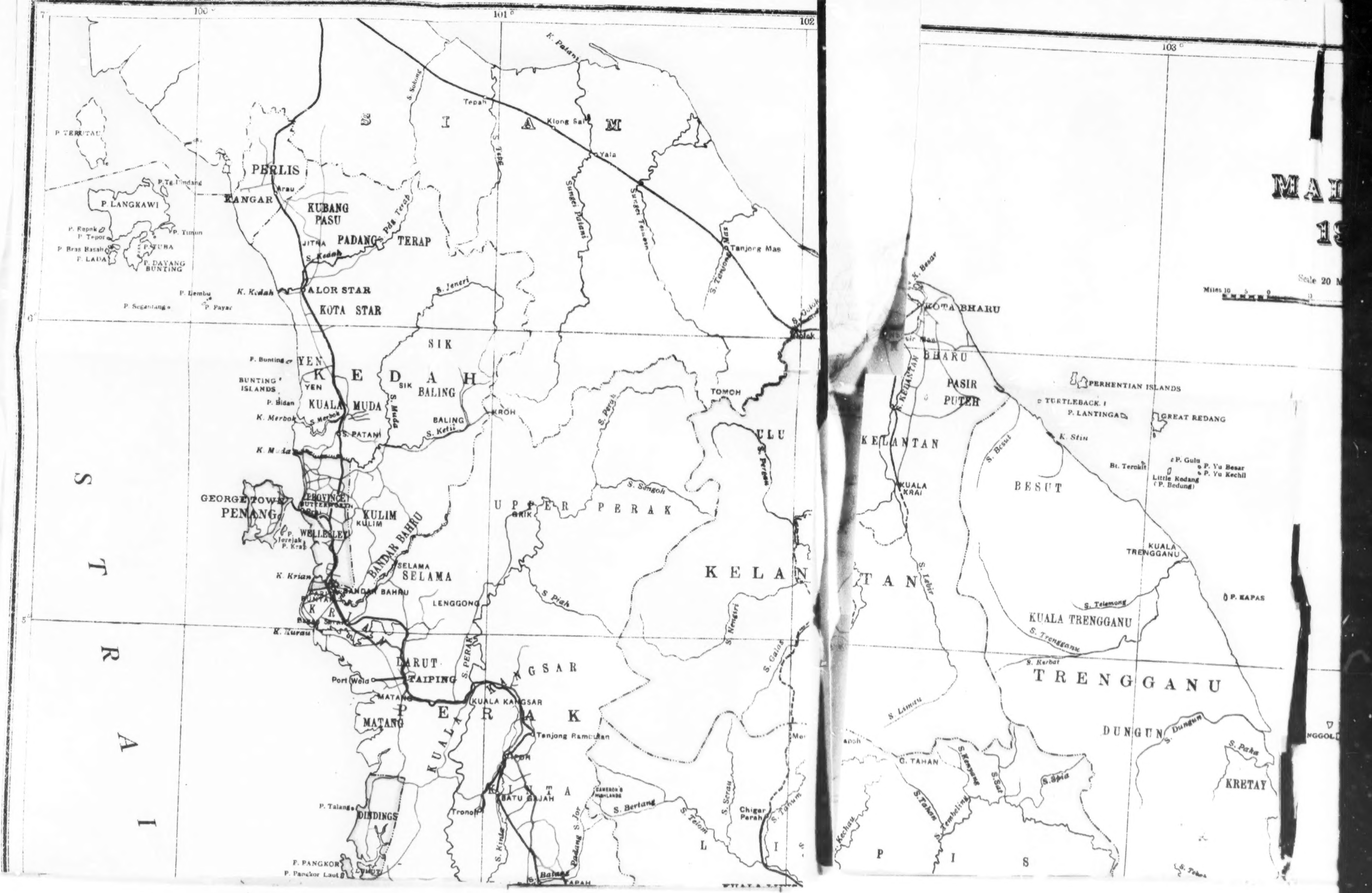
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.





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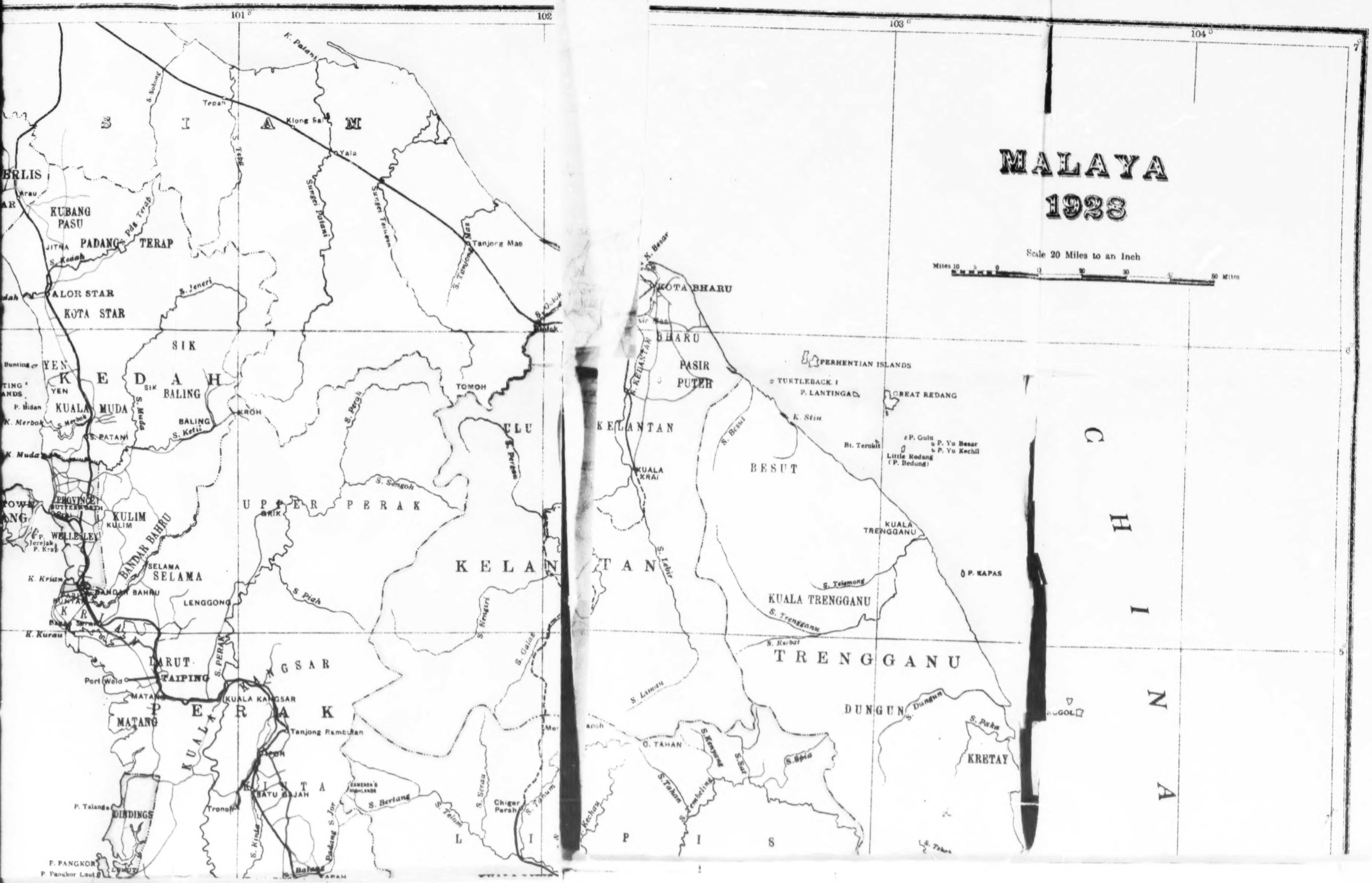
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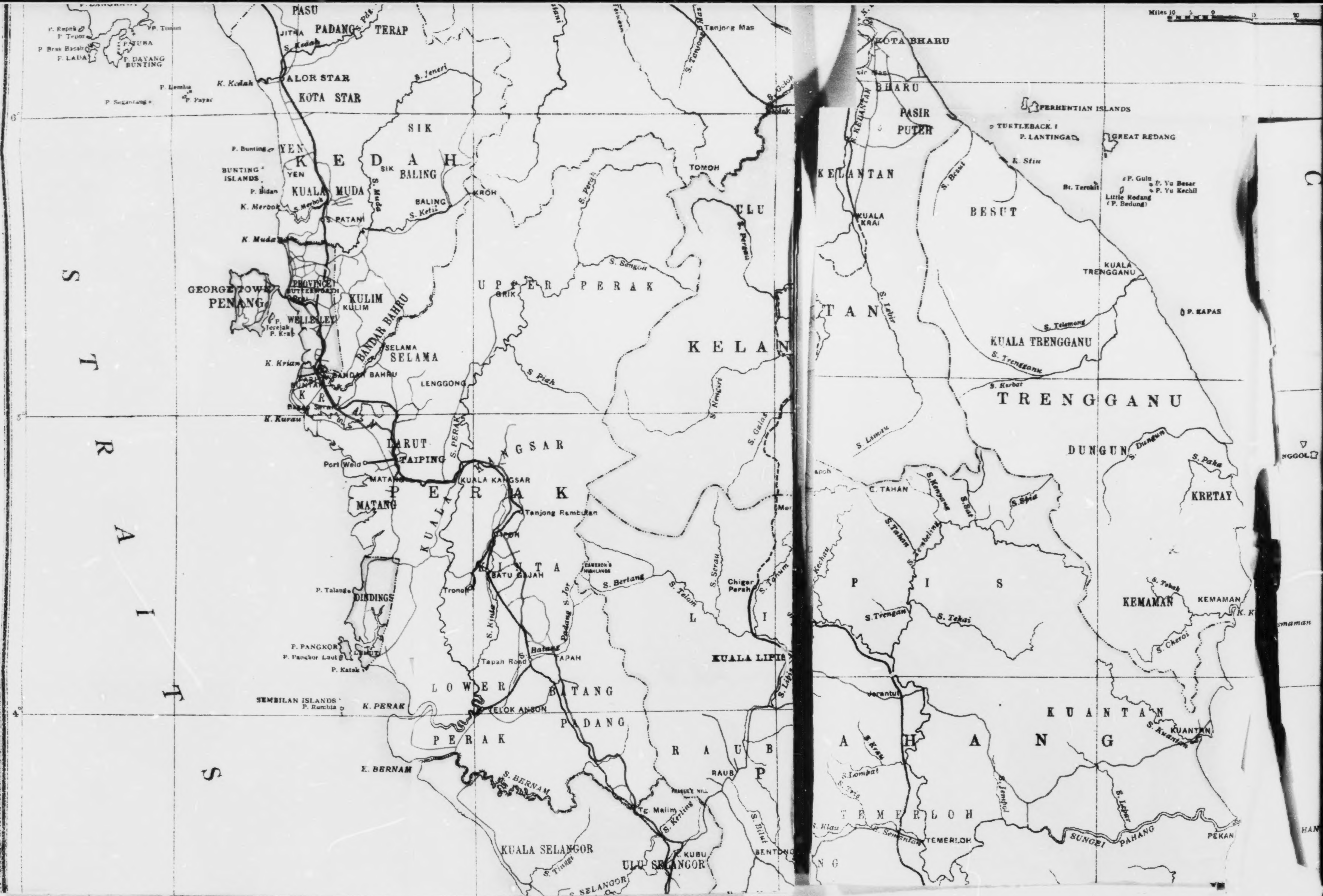

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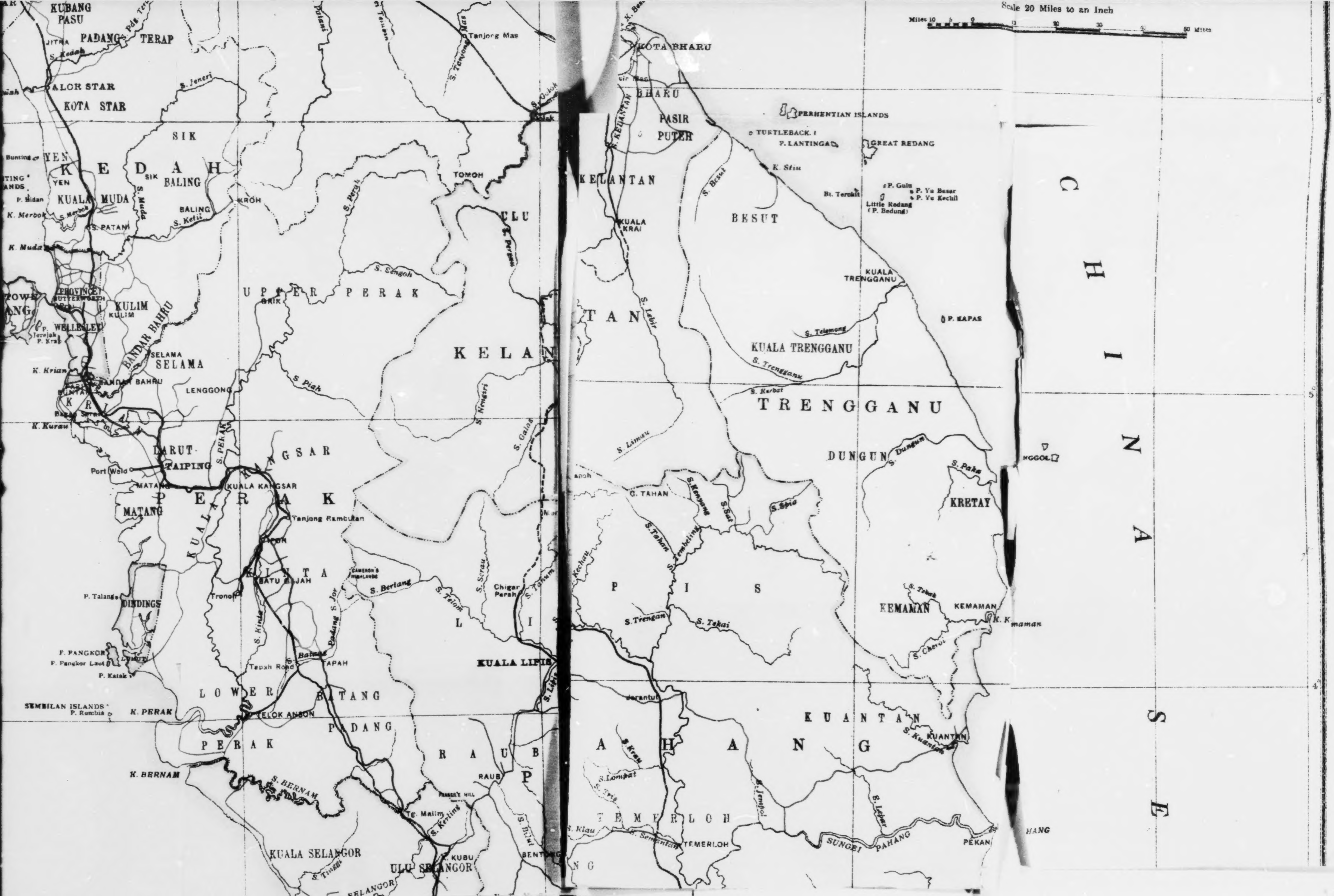
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P. KAPAS
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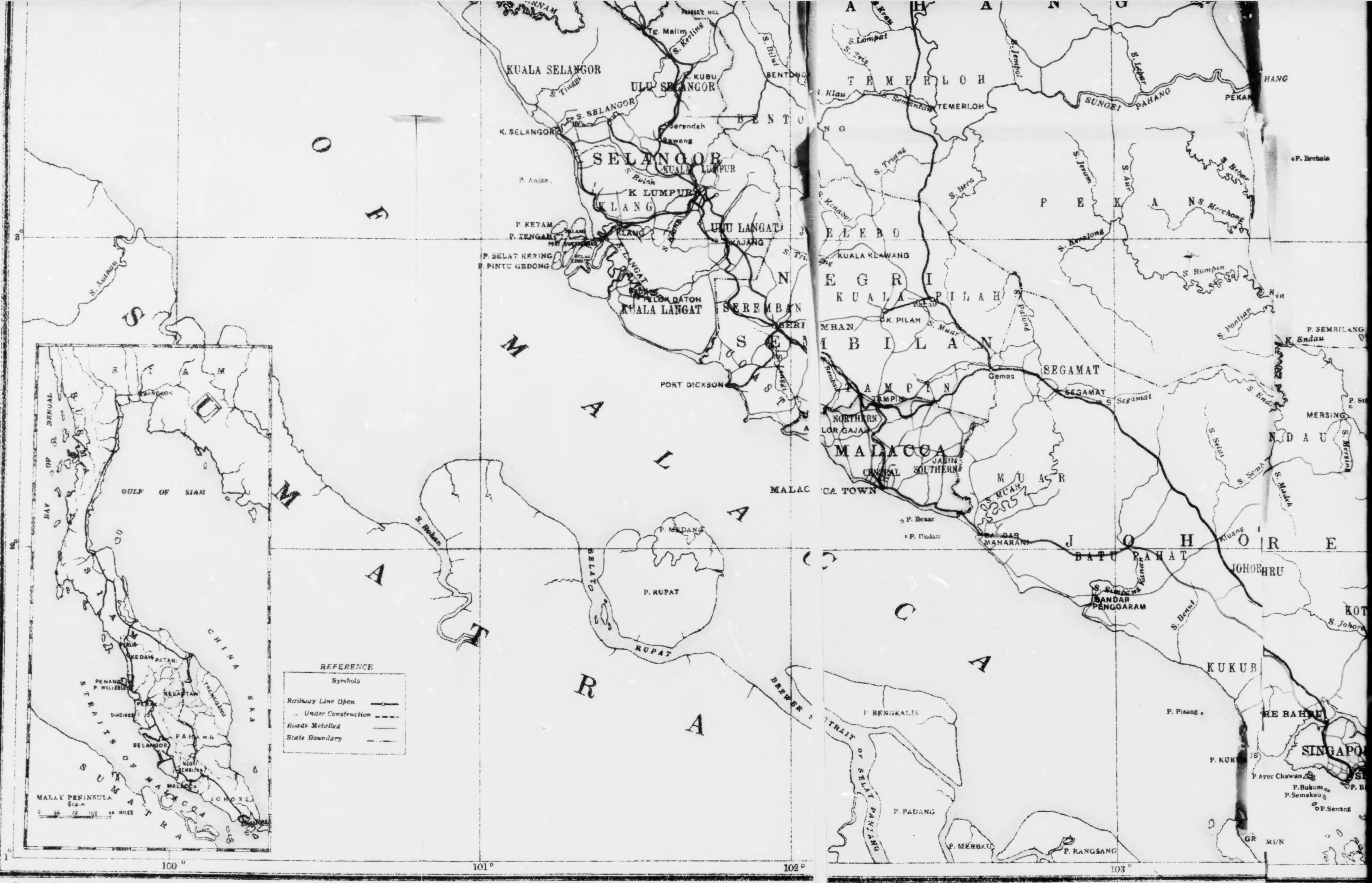

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S. Simpang Kiri
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SINGAPORE
P. Ayer Chawan
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P. Senang
P. Merbau
P. RANGSANG
P. PADANG
P. BENGKALIS
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P. MEDANG
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S. Rokan
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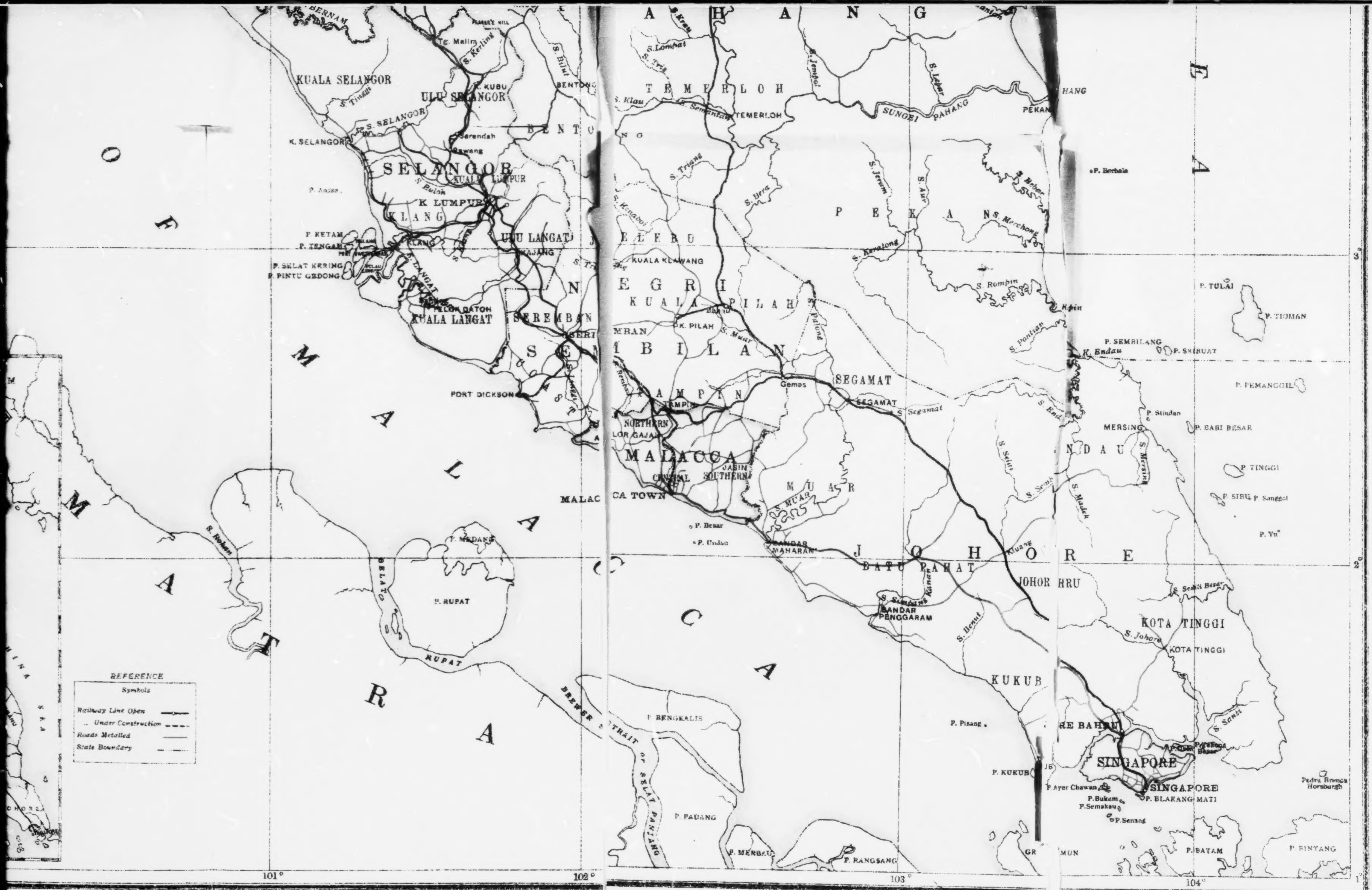
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S. Johore
S. Sedili Besar
S. Santi
SINGAPORE
P. Ayer Chawan
P. Bukom
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P. Senang
P. BLAKANG MATI
P. Tekong Besar
Pedra Branca Horsburgh
P. BATAM
P. BINTANG
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S. Rokan
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SELAT RUPAT
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„ Under Construction
Roads Metalled
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102°
103°
104°
1°
2°
3°

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FEDERATED MALAY STATES.

ANNUAL REPORT

FOR

1928

BY

WILLIAM PEEL, K.B.E., C.M.G.,
Chief Secretary to Government, Federated Malay States.

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FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1928.

PREFACE.

HISTORY.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose

advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, K.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal

sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895. the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which

directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese—in Perak an Indian now sits on the Council. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the

Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, the Commissioner, Trade and Customs, one Official Member nominated by the High Commissioner, and twelve Unofficial Members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

GEOGRAPHY.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

Selangor (3,150 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

CLIMATE.

The temperature on the western side of the main range of mountains which forms the backbone of the Malay Peninsula has little appreciable variation throughout the year. At Kuala Lumpur—a fairly typical station—the mean maximum temperature is 90°F. and the mean minimum 72°F., giving a range of 18°F.

On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. As the temperature is high and the variation so small the rain which cools and freshens the atmosphere is a most important factor in the comfort of life in the Malay Peninsula. The rain is generally of a torrential nature and most of it falls between the hours of noon and 8 p.m., 5 p.m. being the wettest hour of the day. Records from stations on the West Coast of the Peninsula, where the South-West Monsoon is broken by the high land of Sumatra, show that April and October are the wettest months. There is a decrease from April to July which is the driest month, rising to a second peak in October and decreasing to moderate rainfall in January. Although there are no very clearly defined wet and dry seasons as occur in some other tropical countries and rain falls the whole year round, it does divide itself into periods, March, April, May and October, November, December are wet months, February, June, July and August dry, while September and January are months of variable and moderate rainfall. Even to this general rule there are considerable variations due to abnormalities in the time of change of the monsoons.

On the West Coast of the Peninsula the coastal stations are the driest, the average rainfall being about 85 inches. This gradually increases inland, and the stations close to the foot of the main range of mountains show an average fall of about 105 inches. On the East side of the Peninsula, which is exposed to the full force of the North-East Monsoon blowing in from the China Sea, the coastal stations are much the wettest, having a mean rainfall of about 130 inches.

It is heaviest during December and January during which months the North-East Monsoon is at its height. Landwards the fall gradually diminishes, until, at the eastern side of the main range the stations show a mean of 95 inches. On this side of the Peninsula, October, November, December, January are the wet months with a steady decrease till July—which again is the driest month—and a gradual increase culminating in December—the wettest month. In the mountains the rainfall is comparatively high, particularly in the Larut Hills above Taiping, where the average at "The Cottage" (4,513 feet) for the years 1904-1928 is 248 inches. Taiping at the foot of these hills, has the highest rainfall of the low-level stations with an average of 167 inches. The Larut Hills are however exceptional, as the average for other hill stations of approximately the same altitude, but situated in the main range of mountains, is for Fraser's Hill (4,289 feet) and Cameron's Highlands (4,650 feet) 113 inches. The district of Jelebu, situated in the northern part of Negri Sembilan, and sheltered from the influence of both North-East and South-West Monsoons, is the driest in the Peninsula, with an average rainfall in the years 1891-1928 of 64 inches. Negri Sembilan, owing to the absence of high mountains, has the lowest rainfall of the States of the Federation, the average of six typical stations being only 81 inches.

The heat, owing to the high relative humidity (80 per cent.), is at times oppressive, although 100°F. has never been recorded in the shade, and there is almost always a slight breeze to modify the heat. On the coast the nights are sometimes oppressive but inland are comparatively cool, and refreshing sleep is always possible without the aid of fans or punkahs. On the hill stations the temperature has been known to fall to 40°F. at night.

Charts and statistics, however, do not disclose two important features, viz., the brilliant sunshine which is the rule during the morning, and the dry spells—often extending to three or four weeks—when the grass becomes parched.

The Peninsula lies within the region of the South-West and North-East Monsoons, but owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which gathers velocity over the open space of the China Sea, but even this rarely attains gale force, and then only for short intervals.

Violent squalls known as "Sumatras" are not infrequent on the West Coast of the Peninsula between April and September. They are generally of short duration, occur mostly during the night or early morning and are often accompanied by severe thunderstorms and torrential rain.

HILL STATIONS.

Cameron's Highlands.

Progress was made in the general development of this hill station.

The Development Committee met on 10 occasions and a sub-committee, appointed to advise on the general lay-out and zoning of the area, held eight meetings—its work being nearly completed by the end of the year.

Good progress was made on the road to the Highlands and a start was made on the preparation of a recreation area, 150 acres of jungle being felled and partly cleared on this area. Until the road is completed—probably in the latter half of 1930—no general building development is practicable.

A considerable amount of preliminary work such as surveys and investigations for roads, zoning areas, waterworks supplies, etc., has been done and much useful information has been acquired for future guidance.

The total sum of money expended was as follows:

Under Development Committee	$ 86,708.19
Main Road Construction	1,199,995.05
P.W.D., Other Charges, etc.	14,998.19
Total ...	$1,301,701·43

Fraser's Hill.

Work on the Circular Road on the Southern Ridge was completed.

The waterworks installation came into use during the year but a shortage of water was still experienced during the dry months.

This station is becoming increasingly popular, it being estimated that 6,000 visitors visited the hill during the year, the demand for accommodation being pressing at all times.

The golf links, paths and other amenities for recreation were maintained during the year.

The dairy and agricultural gardens were upkept during the year but demands frequently exceeded supplies of both milk and vegetables.

The new "Lodge" for the High Commissioner and the Chief Secretary was occupied before the close of the year.

A rest-house and a new bungalow were in course of erection at the close of the year.

The money expended at this hill station was:

Under the Development Committee	$142,666.51
Under Public Works Department	171,697.80
	$314,364.31

GUNONG ANGSI.

This is a small hill station containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

GUNONG TAHAN.

The establishment of a hill station at Gunong Tahan was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The wettest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76°F. on three occasions, and the lowest minimum temperature 48°F. There appears to be no record of investigations into the area available for the residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

KLEDANG.

This hill is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) cn the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

PRINCIPAL LANGUAGES.

The principal languages spoken are English, Malay, Tamil and Chinese. The lingua franca is Malay.

CURRENCY.

The unit of currency is the silver dollar which is divided into 100 cents. The value of the dollar is fixed at present at two shillings and four pence. Subsidiary silver coins are those of value 50 cents, 20 cents, 10 cents and 5 cents. There is also a nickel 5-cent coin and copper or mixed metal coins of 1 cent denomination.

WEIGHTS AND MEASURES.

English, Malay and Chinese weights and measures are used. A pikul (equivalent to 133⅓ lbs.) is sub-divided in 100 katties of 16 tahils each. A koyan consists of 40 pikuls and is equivalent to 5,333⅓ lbs. avoirdupois. A gantang is the equivalent of one gallon and a chupak is equal to a quart.

Chinese equivalents to a tahil, a kati, a pikul and a koyan are a leong, a kan, a tam and si sap tam, respectively. Chinese equivalents to a chupak and a gantang are a chup put and a tang, respectively.

ANNUAL REPORT, 1928.

I.—GENERAL.

One of the most important events of the year was the removal of the restriction on rubber exports. Early in February the Premier announced that he had appointed a Committee to report on the Restriction Scheme. Although it must have been obvious for some time previously that the scheme required serious investigation, there was a feeling in some quarters that the Premier's proposal was premature. The appointment of the Committee gave rise to a feeling of uncertainty and there was a sharp drop in the price of rubber.

As a result of the Committee's deliberations, it was announced in April that restriction would be removed as from the 31st October. This caused another serious drop in the price of the product and led to a strong feeling of pessimism amongst many people, which the position at the end of the year proved to be unjustified. There was considerable evidence that the industry, freed from restriction, would become more healthy than it had been in the latter days of the restriction period.

There appears to be every prospect of a greatly increased demand, whether as a result of a lower price or due to normal expansion, and there is no reason to think that such increased demand will not be maintained. For this to be achieved however it would appear necessary to maintain the price at a reasonably economic figure: undue inflation would probably have the disastrous effect of retarding the rate of increase in consumption.

River improvements.

The Commission appointed in 1927 to enquire into the question of improvement and maintenance of rivers submitted its report in March, 1928. One of its recommendations was that mining companies should be allowed to dredge over certain new approved river beds into which existing rivers should eventually be diverted, the existing beds being thereafter dredged for tin.

It also recommended the creation of a Rivers Advisory Board to advise Government, when so requested, on matters connected with the improvement and maintenance of rivers.

The Board was duly appointed, and has already proved its utility, but certain mining questions connected with the proposed mining scheme referred to above had not been all solved at the close of the year.

II.—FINANCE.

Budget for 1928.

The Estimates of Revenue and Expenditure for the year 1928 provided for a revenue of $96,170,398 and an expenditure (excluding Railway capital expenditure and other expenditure on public works provided for out of loan moneys) of $108,986,756.

Actual revenue and expenditure.

The actual revenue for the year was $95,655,560 and the expenditure was $109,004,240. Thus the deficit was $13,348,680 against an estimated deficit of $12,816,358.

The excesses in revenue as compared with the estimate were:

$ 81,559	under	Rent on Government Property;
234,094	,,	Lands and Mines;
313,137	,,	Light, Water and Power;
864,228	,,	Fees of Court;
557,895	,,	Land Sales;
416,782	,,	Interest;
484,415	,,	Licences;
151,249	,,	Forests;
227,794	,,	Municipal;
356,387	,,	Miscellaneous Receipts;
90,481	,,	Posts and Telegraphs.
$3,778,021	Total.	

The shortages in revenue as compared with the estimate amounted to $4,292,859 as under:

Customs	$2,389,312
Excise	1,251,106
Railway	652,441

The shortage in Customs revenue was arrived at as follows:

	Shortage.	Excess.
Tin Duty	$ —	... $1,534,740
Tobacco	—	... 159,896
Other items ...	—	... 291,830
Rubber Duty ...	3,789,396	... —
Spirits	586,382	... —
	$4,375,778	... $1,986,466

Nett shortage $2,389,312.

The shortage in Chandu Sales under Excise was $1,089,861.

The total savings in expenditure amounted to $6,435,858, the largest items being:

Pensions	$227,388
Civil Service	136,335
Customs	207,489
Miscellaneous (Reserved)	483,769
Posts and Telegraphs	913,115
Agricultural	143,925
Clerical Service	128,987
Education	430,092
Electrical Department	296,601
Electrical Department, S.S.	454,000
Medical	435,972
Police	232,895
Public Works Department	234,139
Public Works A.R.	350,560
Public Works Extraordinary	798,389
Purchase of Land (F)	243,302
Surveys	196,437

Excesses over estimated expenditure totalled $6,453,342, the largest items being:

Charges on account of Public Debt ...	$1,143,821
Railways (Revenue Account)	4,170,862
Purchase of Land	845,062

The excess under the head of "Charges on account of Public Debt" is due to the investment in 1928 of $1,143,858, account Supplementary Sinking Fund contribution for the year 1927.

The excess under Railways (Revenue Account) is caused by the transfer of the sum of $5,233,754 to a Railway Renewals Reserve Fund, while that under the head of Purchase of Land is due wholly to the large acquisition of land by Government near Ipoh and to the acquisition of the race-course in Kuala Lumpur.

Public debt.

The public debt remained as on the 31st December, 1927, viz., $80,185,714, and consists of the Straits Settlements Sterling Loan of £9,355,000. The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97 bearing interest at 6 per cent. and the second instalment (£4,200,000) was issued in May, 1922, at 95, bearing interest at 4½ per cent.

The Sinking Funds, contributions to which commenced in 1925, amounted to $8,606,800.

Assets and liabilities.

The following statement shows the assets and liabilities on the 31st December, 1928:

		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		2,449,972	45
Sundry Outstanding Accounts		330,374	38
Due to other Governments (Current Account)—			
India	$ 20,746.84		
Kedah	441.17		
Singapore	3,672.63		
		24,860	64
Due to India		109,549	78
Ceylon Agency Account		139,475	35
Family Remittances		6,801	20
Deposits—			
Courts	$314,405.98		
Forests	298,560.05		
Lands	426,334.20		
Postal	339,722.34		
Planters Loans Board	525,000.00		
Miscellaneous	650,378.01		
		2,554,400	58
Railway Renewals Reserve		8,839,429	60
Sundry Funds—			
Bailey Fund	$ 900.00		
Police Fine and Reward Fund	32,183.25		
Public Officers' Guarantee Fund	269,844.53		
Victoria Institution Building Fund	99,850.81		
Composition Stamp Duty Fund	304,942.99		
Miscellaneous	36,092.75		
		743,814	33
War Savings Certificates		300	00
Singapore Naval Base Contribution Account		7,817,142	85
Opium Revenue—Replacement Reserve Fund		18,189,360	90
Suspense		193,635	59
Capital Fund—Bagan Serai Rice Mill		382,429	73
Capital Fund—Kuala Kurau Rice Mill		250,000	00
Capital Fund—F. M. S. Government Factory		400,000	00
Surplus—			
Reserved for Railway Capital Expenditure and Public Works Special Services	$57,244,473.00		
Balance unallocated	25,635,491.19	82,879,964	19
		125,311,511	57

		$	c.
Cash in Treasuries and Banks as per distribution statement		6,698,852	15
Cash with Agencies—			
Crown Agents	$ 101,076.04		
F.M.S. & S.S. Joint a/c., India	34,399.00		
Malay States Information Agency	3,934.27		
Penang Agency	13,530.42		
Singapore Agency	246,665.71		
		399,605	44
Cash in Transit		742,637	55
Fixed Deposits		10,000,000	00
Advances at call and other temporary investments by Crown Agents		12,119,999	97
Investments (Surplus Funds)—			
S.S. Municipal Debentures (at cost)	$ 6,900.00		
Sterling Securities	16,362,736.02		
Perak River Hydro-Electric Power Co. Ltd.	4,285,714.29		
Nipah Distilleries of Malaya Ltd.	42,857.15		
	20,698,207.46		
Less Redemption Reserve	26,702.96		
		20,671,504	50
Investments—Singapore Naval Base Contribution		7,817,142	85
Investments—Opium Revenue—Replacement Reserve Fand		17,835,386	34
Investments (Specific Funds) (at cost)—			
Bailey Fund	$ 900.00		
Police Fine and Reward Fund	28,594.70		
Public Officers' Guarantee Fund	256,055.62		
Fire Insurance Fund, Railways	46,593.37		
V. I. Building Fund	98,950.81		
Security Deposits Account	33,974.50		
Composition Stamp Duty Fund, 4½ per cent. Loan with Crown Agents	304,942.99		
		770,011	99
Family Remittances		321	45
Due by other Governments—			
Ceylon	$ 273.35		
Crown Agents	1,269.01		
Johore	8,962.89		
Kelantan	2,673.72		
Trengganu	7,764.82		
		20,943	79
Sundry Outstanding Accounts		16,716	16
Straits Settlements Government War Service Land Grant Scheme		1,090	57
Loans—			
Siamese Government (*b*)	$34,834,841.63		
Brunei Government	403,000.00		
Perlis Government	50,000.00		
Planters	1,270,175.59		
War Service Land Grant Scheme	1,924,493.53		
Agricultural	66,607.91		
Buildings	377,628.35		
Miscellaneous	1,645,460.63		
		40,572,207	64
Advances		153,177	85
Imprests		89,445	82
Bentong Tailings Retention Scheme		205,393	68
Stores and Materials Accounts, Railways		3,284,077	19
" " " Post Office		1,307,597	41
" " " P.W.D.		150,090	14
" " " Electrical Board		282,748	84
" " " Timber Branch		11,609	06
" " " Marine Slipway		44,258	57
Marine Slipway Account		15,073	81
Timber Account—Forest Department		976,885	43
Furniture making Account, Forest Department		5,267	69
Minor Forest Produce Account—Forest Department		11,054	18
Suspense		75,929	27
Inter-Treasury Account		52	52
Bagan Serai Rice Mill		382,429	73
Kuala Kurau Rice Mill		250,000	00
F.M.S. Government Factory		400,000	00
		125,311,511	57

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

The Loan to Siam.

The Loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $34,834,842 on the 31st December, 1928, having been reduced by the payment of the fifth instalment due on 1st January, 1928. As this loan is being repaid by equal yearly payments to include both principal and interest, the principal part of the instalments will steadily increase.

Loans to Perlis and Brunei.

The loans to Perlis and Brunei which stood at $100,000 and $407,000, respectively, on 31st December, 1927, have been reduced to $50,000 and $403,000, respectively, by the payment of the annual instalments due in 1928.

Surplus.

The surplus on 31st December, 1927, was $96,228,644. As the expenditure for the year exceeded the revenue by $13,348,680, the surplus was reduced to $82,879,964 on 31st December, 1928, of which a sum of $57,244,473 has been reserved for Railway capital expenditure and public works, leaving a balance of $25,635,491 unallocated on 31st December, 1928.

The liquid assets, comprising cash, advances at call, fixed deposits and easily realisable investments amounted to $46,304,028 at the end of the year as compared with $67,216,609 at the beginning. This does not take into consideration the investments earmarked for certain specific funds.

Singapore Naval Base.

To meet payments of the contribution of £2,000,000 towards the cost of the Singapore Naval Base, investments worth £2,000,000 were set aside in 1926 to form a special fund. Up to the 31st December, 1928, payments amounting in all to £1,088,000 had been made to the Admiralty, War Office and Air Ministry, leaving a balance on the fund of £912,000.

Opium Revenue Replacement Reserve Fund.

The Opium Revenue Replacement Reserve Fund stood at $18,189,361 on the 31st December, 1928, of which $17,835,386 was represented by investments and the balance by cash awaiting investment. This fund was started with $10,000,000 provided out of revenue in 1925, to which has been added 15 per cent. of the annual revenue from chandu sales together with the accumulated interest. The contribution from 1928 revenue was $1,906,521.

Railway Renewals Reserve Fund.

The Railway Renewals Reserve Fund stood at $8,839,430 on 31st December, 1928. The contribution added in respect of the year 1928 was $5,233,754.

Sterling loan capital account.

A statement of the sterling loan capital account is published as appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on railway and other works up to the 31st December, 1928, accounted for $71,847,577, leaving a balance of $2,449,972 still available to meet capital expenditure during 1929. This balance is largely in excess of the estimated balance of $880,000 and is almost wholly due to an over-estimate of expenditure by the Railway.

III.—PRODUCTION.

AGRICULTURE.

Staff.

The higher establishment of the Department of Agriculture, excluding the Secretary for Agriculture, comprised 43 European officers, 30 on the Research Staff, one Instructor of Malay Officers, and 12 on the Field Staff, the latter including three officers in the Colony and one in Johore. Two Research Officers were seconded for the year, one to the Rubber Research Institute and one to the Co-operative Societies Department. Five substantive appointments were not filled during the year.

General.

The year was characterised by an increasing and in some cases very practical interest in the cultivation of crops other than rubber. This interest has undoubtedly been stimulated to a considerable extent by the fall in the price of our most important agricultural product, but it appears to be by no means ephemeral and to give promise of possible future developments that may prove of considerable importance to the country.

The large number of enquiries received have related especially to the cultivation of oil palm, pineapples, coffee, tea and tuba root.

Rubber.

General.—The interest now evinced by plantation companies in modern developments for obtaining high yielding rubber trees is indicated by the fact that 31,055 metres of budwood, 25,353 budded stumps and 387,110 selected seed were imported from Java and Sumatra in the course of the year.

A new development during the latter half of the year was the creation by an American Corporation interested in the manufacture of rubber seed oil of a market for rubber seed in this country. All the seed purchased was exported to Medan in Sumatra where the Corporation's decorticating plant is situated. The total exports amounted to 7,905 tons of seed valued at $246,940. The price offered by the Corporation, $22 per ton, was sufficient to provide a good margin of profit to most estates situated at no great distance from a railway or port, while the

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spare time occupation was of considerable value to the labour force, particularly where Indians were employed. It is hoped that this trade will be further developed and will lead to the erection of a decorticating plant in Malaya.

Diseases.—Dry weather in the first half of the year exercised an effective check on outbreak of "Mouldy Rot" disease (*Ceratostomella fimbriata*), but with the advent of the rains later in the year reinfection became general in all areas previously attacked and the fungus spread to a few new localities in various parts of the Peninsula. Attacks of most of the well-known diseases of rubber, such as "Pink Disease" and root diseases, were recorded, but call for no particular comment.

Padi.

General.—The area planted with wet rice in the Federated States was approximately 154,000 acres from which a crop of about 29 million gantangs was obtained. These figures represent a decrease of about 5,000 acres in the planted area but an increase in crop of approximately 7½ million gantangs. Of this increase nearly half was obtained from the irrigation area in Krian where the yield for the year was only slightly below the average for the last decade.

A good crop was obtained in Pahang where the detritus deposited by the flood of 1926-27 proved very fertile in the first year of its existence. In the remainder of the Federated States yields were below the average of the last decade, partly owing to drought in the planting season and partly to damage done to the standing crop by heavy rains in March and April. The price obtained for the crop in 1928 averaged about 15 cents a gantang.

In the 1928 planting season the weather was again very dry and planting operations were much delayed, notably in Krian. Once established, however, the crop made favourable progress and prospects at the end of the year were fair, provided that the harvest could be reaped without serious damage by rain.

Experimental Investigations.—The selected strains of Krian padi continued to give satisfactory results in comparison with local varieties in many parts of the Peninsula, reports of increased yields varying from 25 to 50 per cent. being received from trial areas in different districts. It is now well established that crops grown from selected seed in most instances show comparative resistance to lodging under adverse weather conditions, give better milling returns and shed less grain than crops obtained

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from unselected seed. Although 14,900 gantangs of selected seed were distributed for planting, much greater use could still be made of these improved strains with advantage to the padi growing community.

Field experiments to determine the effect of soil factors and manures on yield have proved to be so subject to interference by outside influences, such as insufficient control of water supply and drainage and the depredations of rats, birds and other pests, as to render it difficult to obtain reliable results. For this reason fifty special tanks have been constructed at Serdang where experiments can be conducted under strictly controlled conditions of water supply and drainage and with protection from rats and birds.

The experiments designed to obtain information on the possibilities of storing rice and padi, as a reserve for use in any period of shortage, have been commenced. Determinations of moisture content of rice stored under varying conditions show a definite increase in the moisture content with the arrival of the wet season.

Pests.—The rat campaign in Krian was continued vigorously throughout the year. The total number of tails collected amount to 904,644 as against 842,791 in the previous year. The total cost of the campaign amounted to just under two cents for each rat destroyed. Evidence of its useful effect is provided by the fact that practically no damage to the growing crop occasioned by rats had been recorded at the end of the year.

A local outbreak of Padi Fly (*Leptocorisa acuta*) in Kuala Pilah district of the Negri Sembilan was successfully controlled by the organised application of simple measures depending on the use of cheap local materials and the communal labour of the landowners encouraged and directed by the District Officer and certain members of the Agricultural Department in the State.

Coconuts.

General.—The Singapore market price for copra opened in January at $11.90 per picul. It subsequently declined to $10.10 per picul at the end of August and after fluctuating between this figure and $10.60, closed in December at $10 per picul. The average price throughout the year was $10.90 as compared with $11.17 in 1927.

The exports of copra from the Federated States amounted to 68,504 piculs valued at $11,459,708, the corresponding figures for 1927 being 57,536 piculs and $10,142,826.

Erratum Slip.

ANNUAL REPORT OF THE CHIEF SECRETARY TO GOVERNMENT, F.M.S., FOR THE YEAR 1928.

Page 18, last two lines, *for* "68,504 piculs" and "57,536 piculs" *read* "68,504 tons" and "57,536 tons" respectively.

Whereas the crops for 1927 were below average, those for 1928 were satisfactory in most districts. Thus the increase in exports is partly accounted for by improvement in the crop, though an increase in the producing area is also a contributing factor in the States of Perak and Selangor.

Experimental Investigations.—Whilst records already published have shown that individual palms vary widely from one another in their average annual yield of nuts, data have also been compiled which show that individual palms of the same variety also vary widely from one another in the average copra content of their nuts. Further data on the oil content of the copra from different palms and on the seasonal variation in the oil content of copra from the same palm are in process of compilation.

The Coconut Experimental Station at Klang has been maintained in good condition and the general growth of the palms is satisfactory. The manurial cultivation and catch-crop experiments are also being maintained on this station.

A scheme for instituting research work on the preparation of copra has been approved and the Empire Marketing Board has undertaken to contribute a half share of the provision made for this work. In the meantime preliminary chemical investigations connected with this scheme have been commenced.

Diseases and Pests.—The situation with regard to the problem of palm diseases in Malaya has been considerably clarified and a general account of the whole of the palm disease investigations has been published. An outbreak of the leaf-eating caterpillars of a moth (*Setora nitens*) occurred in Lower Perak district. This was investigated and control measures were recommended. Work on the Greater Spike Moth (*Tirathaba rufivena*) has been continued and it has now been confirmed that treatment by removing the flower sheath just before it opens results in an increase in the percentage of nuts remaining in the spike.

Other crops.

Oil Palms.—Satisfactory progress has been made in the development of the oil palm industry during the year. Twenty-five estates have a total planted area estimated at 24,730 acres with reserve land amounting to about 25,000 acres, while a further area of 25,000 acres represents recent alienations of land on which planting operations have not yet been commenced Six estates were producing oil and kernels. The exports foı 1928 were 1,482 tons of oil and 261 tons of kernels valued together at well over $400,000. The average price of palm-oil has been about £38 per ton and that of kernels about £20 per ton. The Malayan oil has commanded a premium above the market prices on account of its purity.

Variation studies of palm fruits were continued. Determinations of the percentage of oil in fruits at varying stages of ripeness show that the maximum oil content is not reached until the fruits have attained full maturity.

Comparisons of factory methods indicate that, as regards the treatment of the whole fruit, the efficiency of the centrifugal process adopted in Malaya compares favourably with that of the press system as employed in Sumatra. Advice has been given by the Agricultural Department on various points that have arisen during the working of estate factories.

Further experiments show that the increase in the acidity of palm-oil of average quality on storage is quite small, and that storage in iron vessels does not increase the iron content of the oil in a period of three months. This last point is of interest in view of the possible shipment of oil in tanks in the near future.

A number of other points connected with the cultivation of oil palms and the preparation of the market products are under investigation.

The publication "The Oil Palm in Malaya" issued by the Department of Agriculture was much in demand and aroused considerable interest in the cultivation of this crop in Malaya.

Pineapples.—Interest in this crop has been maintained. Exports of canned fruit from Malaya amounted to 46,400 tons valued at nearly 8½ million dollars. Johore still remains the principal centre of this industry.

Advantage has been taken of facilities provided by the Empire Marketing Board for staging exhibits of Malayan canned pineapples at important Shows and Exhibitions in Canada and the United Kingdom.

Attention has been called to the importance of grading and standardising this product, if it is to retain successfully its place on the market. This aspect of the industry was discussed at an informal meeting of packers and shippers with Mr. E. M. H. Lloyd of the Empire Marketing Board, held in Singapore on the 2nd May.

Coffee.—There has been increased interest in coffee cultivation during the last two years, many enquiries regarding this crop having been received. There is still, however, scope for considerable increase in the planted area to meet the local demand alone, apart from the possibility of developing an export trade.

In connection with coffee cultivation measures for the control of two important pests must be taken into account. One is the well-known hawk moth, *Ophanodes hylas*, so destructive on local estates before the advent of rubber. The other is the coffee-berry beetle, *Stephanoderes hampei*, a well-known pest in Java, which has recently been found on one or two estates in Selangor.

Tea.—Widespread interest has been evinced in the possibility of cultivating both the upland and lowland types of this crop on a plantation scale in Malaya. This interest has in a few instances taken material shape, in that preparations are being made for developing a lowland plantation in Selangor and that a considerable area has been alienated for this cultivation in the hills of Pahang not far from Cameron's Highlands.

Experienced planting opinion is divided on the subject of the probable relative merits of the lowland and upland types in Malaya, but the consensus of opinion is at present somewhat in favour of the upland product on account of its better market prospects.

While the results obtained from experimental areas are encouraging, further work has yet to be done before it is definitely proved that tea cultivation can be established on a sound commercial basis either in the lowlands or in the hill country of Malaya.

Areca Nuts.—Production has in general been well maintained and an increased output is reported from Johore where comparatively large extensions have recently been made in the planted area. Prices have, however, continued to decline. Greater care in curing and grading would benefit the local industry.

Records of yields of individual palms have been continued at Serdang.

Tuba Root. (*Derris* spp.).—The use of this root in the preparation of proprietary insecticides is gradually being extended with a corresponding increase in the demand for the raw product.

The planted area in Malaya now approximates to 3,000 acres.

Chaulmoogra Oil.—The area planted at Serdang with trees yielding chaulmoogra oil has been extended. A sample of nuts of *Hydnocarpus anthelmintica* was reported on by the Medical Officer in charge of the Leper Asylum, Kuala Lumpur, as being of good quality and indistinguishable from nuts obtained from Siam.

Pepper.—The shortage of supplies continues and it is remarkable that the present high price has so far attracted little, if any, attention from those having a knowledge of pepper cultivation.

Government Experimental Plantation.—The total area now opened, inclusive of the site for the proposed School of Agriculture, is 800 acres. The road system, giving good access to all experimental plots, is now complete.

The principal features of the plantation are the oil palm, tea and coffee areas, the collection of cover crops, fodder and grazing grasses, the fruit nursery and orchard and the stock farm.

A site was prepared for an experimental oil palm factory and an order was placed for the necessary machinery which is expected to be in use about the middle of 1929.

Equipment for manufacturing tea on a small scale has been obtained. A further area of 20 acres was laid down in grazing grasses for the stock farm. The herd now consists of twenty-three head of cattle, mostly of the Montgomery breed which thrives well at Serdang. It also includes two Ayrshire heifers and one Jersey bull. It is hoped that crosses of the two latter breeds with the Montgomery cattle will produce animals well adapted to lowland conditions.

A new cattle byre has been built and a supply of dairy utensils has been received.

Cameron's Highlands.—Additions were made to the areas planted with tea, Arabian coffee and cinchona at the plantation on Cameron's Highlands. In addition a large stock of seedlings of Assam tea, Arabian coffee, cinchona and cardamons were ready for planting at the close of the year.

In the latter part of the year the collection of sub-tropical fruit, vegetables and ornamental plants was considerably enlarged.

The original plot of Assam tea planted in 1926 has attracted much attention.

Soils.—The detailed soil survey has been continued and as a result the characteristics of the three main inland soil types have been determined. No simple relationships have yet been found for alluvial soils in the area under survey.

The survey of padi soils has confirmed the observation made in the report for 1927 that a medium or even high percentage of sand in the soil does not necessarily result in a low yield of padi. Further work has not yet revealed any correlations between individual soil factors and yield of padi.

Preliminary explorations have been made of the land in certain areas of Pahang to which access will be afforded by extensions of the road or railway system.

Chemical investigations.

The investigations relating to the preparation, deterioration on storage and moisture content of *jelutong* have enabled a marked improvement to be effected in the quality of the Malayan product, resulting in an increase in exports from 576 tons in 1927 to 1,002 tons in 1928.

Investigations to determine the effect of tapioca cultivation in relation to soil impoverishment have been continued, but have not yet reached completion.

The efficiency of the process employed in tapioca factories has been examined and it has been found that only about half the total quantity of starch is normally extracted from the tubers, so that there is room for considerable improvement in the efficiency of the extraction process.

Mycological investigations.

It has now been found that the well-known Panama disease of bananas occurs in a few localities in Malaya and that the two varieties, *pisang embun* and *pisang restali*, most likely to suit market requirements, are susceptible to this disease. The resistance of other local varieties is still under investigation.

Agricultural Shows.

The Malayan Agri-Horticultural Association held its sixth annual exhibition at Ipoh from August 3rd to 6th. District Shows were also held at two centres in the Federated Malay States.

School of Agriculture.

Sums of $75,000 and $20,000 were provided on the Federal and Colonial Estimates, respectively, for 1929 as first instalments of the cost of the School of Agriculture. It is anticipated that work will commence on the site at Serdang in the coming year and that the buildings will be completed in 1931.

Distinguished visitors.

The Department of Agriculture was visited in March by Dr. A. W. Hill, C.M.G., F.R.S., Director of the Royal Botanic Gardens, Kew, and in April by the Right Honourable Major W. G. A. Ormsby-Gore, P.C., Under Secretary of State for the Colonies.

FORESTRY.

General.

The year was noteworthy as one in which large schemes of development which had for some time been under consideration were inaugurated. Good progress was made with the new research institute and quarters at Kepong, and most of the new timber-testing plant arrived. Progress was also made with the preliminary work connected with departmental timber operations at Palong, though the progress was not as rapid as had been hoped. In connection with the timber-testing plant Government received very great assistance and much valuable advice from the Forest Products Research Laboratories at Princes Risborough, and the few machines which are being installed are the most up-to-date of their kind. Government has also secured the services of an officer to take charge of them, who has had some years' experience of similar machines at Princes Risborough itself. Malaya should therefore now be able to produce results comparable with those obtained in England, America, and India, and to prove beyond dispute the great strength values of many of its own neglected timbers.

Staff.

At the end of the year there were forty-three officers on the senior staff including the five officers of the Timber Branch and the chemist, but excluding three probationers under training at Oxford. Two of the Assistant Conservators were on deputation in Johore, and one in Kedah. One officer died during the year.

The strength of the locally recruited English-speaking staff at the end of the year was only thirteen, their number having been reduced by one promotion to the senior staff, one retirement, one resignation, and one accidental death. One officer was on deputation in Singapore.

Reserved forest.

At the end of the year there were 5,883 square miles of reserved forest, and 1,556 square miles notified as proposed reserves. A large proportion of the reserved forest, which now exceeds one-fifth of the whole country, is however situated on steep hill ranges and is purely protective.

Output.

The outturn of timber, firewood, and charcoal on which payment was made was 801,348 tons compared with 906,463 tons in 1927, which was a record year. The lack of demand was due to a combination of circumstances, including the increasing use of coal, oil, and electricity, the depressed state of the rubber industry, the comparatively low price of tin, and an unusually prolonged drought, which reduces the demand for both poles and firewood on the mines. Nearly one-fifth of the timber and more than one-half of the firewood now come from reserved forests.

The output of *damar-penak*, most of which is exploited departmentally, rose 50 per cent., and the output of *jelutong* doubled, in spite of a considerable fall in price. The gutta-percha industry is, for the time being, practically dead, and a considerable quantity of the tapped produce remains unsold both in London and in Malaya.

Chemical investigations.

A good deal of valuable chemical work has been done on certain minor forest products, notably *jelutong* and mangrove extracts.

Industries.

It is regrettable that both the plywood and wood distillation industries, which were taken up by private enterprise, failed.

Publications.

Mr. Watson's list of vernacular and botanical plant names was published and is a most valuable and useful piece of work. At the end of the year his treatise on the Malayan mangrove forests was in the press.

MINING.

Export of tin.

The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 61,935 tons compared with 52,179 tons in 1927 and 45,947 tons in 1926. The export of tin-ore represents about 95.3 per cent. of the total. It is interesting to observe that the 1928 exports were again the highest ever recorded from the Federated Malay States. Figures are shown in Appendix A.

Price of tin.

The price of tin at the beginning of the year was $131.00 per pikul. On the 4th of January the price was $131.50 per pikul which was the highest price quoted for the year.

Thereafter the price declined steadily until on the 5th July it had fallen to $103.62½ per pikul. This was the lowest price recorded during 1928. The year closed with the price standing at $114.87½ per pikul. The average price for the year was $114.18 which was $30.75 lower than the average price for 1927.

Fluctuation in price of tin.

The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

Heading.	1922.	1923.	1924.	1925.	1926.	1927.	1928.
	$	$	$	$	$	$	$
Highest ...	93.62	121.00	148.00	145.50	157.50	159.00	131.50
Average ...	80.64	101.75	124.19	131.77½	144.59	144.93	114.18
Lowest ...	71.75	88.50	100.75	116.00	131.75	127.37	103.62½

Labour.

The labour force engaged in mining (including dulang pass holders) was 119,550 at the end of the year. The figures for the preceding three years were: in 1927, 130,424; in 1926, 116,216; in 1925, 115,049. The total does not include labour employed on the extraction and transport of firewood.

There was no shortage of labour during the year but the large programme of dredge construction has caused a scarcity of fitters.

Tungsten.

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for this and the previous year:

	Wolfram.	Scheelite.
1928	5.00 tons ...	Nil
1927	20.00 ,, ...	Nil

Gold.

The production of gold from the Raub Gold Mines was 16,815 ounces as compared with 9,919 ounces in 1927. In addition alluvial gold was recovered in various places to the extent of 1,878 ounces.

Coal.

The production of coal from the Malayan Collieries Ltd., Selangor, was 556,590 tons, an increase in production of 7,010 tons on the previous year. Consumption was as follows:

Federated Malay States Railways	208,624	tons
Mines	285,065	,,
Other Federated Malay States consumers ...	26,763	,,
Exported	253	,,
Consumed at the Collieries	35,885	,,
	556,590	,,

The Enggor Coal Syndicate's Mine at Enggor is the only known coal deposit in the State of Perak. The mine was closed down in the month of June in the year under report. The extent of the deposit proved to be very much smaller than the Syndicate expected and much of the coal was broken and of poor quality. The price obtained for the coal did not pay for the cost of production and there were no indications to justify further development being undertaken.

Dredging.

The output from dredges showed a big advance over 1927, the proportion of the total output so won being 30 per cent. as against 24 per cent. in the previous year.

At the end of 1928 the number of dredges at work was 89, the number under construction 21 and the number on order 9.

Gravel pumps.

Gravel pump mining remains as intensive as ever and nearly 50 per cent. of the total output is won by this method.

The number of such pumps in use at the end of 1928 was 667 as against 645 in 1927 and 577 in 1926.

Thefts of ore.

It is gratifying to record that thefts of ore from mines have apparently ceased as no reports of such thefts were received during the year. This result is no doubt due to the action initiated with reference to dulang washers who were suspected of acting as intermediaries in the disposal of stolen ore. The result is all the more satisfactory in view of the fact that the output of ore for the year was far larger than it had ever been.

IV.—TRADE AND ECONOMICS.

Trade.

The aggregate value of trade for the year 1928 was $469,996,953, a decrease of $46,089,844 or 8.93 per cent. as compared with the year 1927. This decrease was due to the fall in the prices of tin and rubber in 1928. The price of rubber averaged 68 cents per pound during January but fell to 55½ cents in February, when enquiries started in London into the working of Rubber Restriction; and when the announcement was made in April of the proposed removal of restriction the price fell to 32 cents. The price fluctuated between 30 and 32 cents until restriction was lifted and averaged 29 cents during December. The figures of export of tin and rubber for 1928 actually shew a marked increase in quantity exported as compared with 1927.

The distribution of trade per head of the population was $306 as compared with $343 in 1927.

The total values of imports and exports (including re-exports, bullion and parcels post) for the last six years is as follows:

	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1923	89,088,237	197,100,950	108,012,713
1924	97,436,302	212,884,740	115,448,438
1925	137,116,207	411,878,610	274,762,403
1926	173,887,724	445,600,203	271,712,479
1927	176,161,194	339,925,603	163,764,409
1928	191,473,471	278,523,482	87,050,011

Distribution of trade.

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years was as follows:

IMPORTS.

Countries from which imported.	1926.	1927.	1928.
Singapore	43.25	39.78	37.74
Penang	21.22	18.90	16.90
Malacca	1.01	1.06	1.26
Unfederated Malay States	1.38	1.11	1.18
United Kingdom	13.35	15.53	17.69
British Possessions	5.95	5.78	5.50
Continent of Europe	4.24	5.56	5.17
Other Foreign Countries	9.60	12.28	14.56
	100%	100%	100%

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1926.	1927.	1928.
Singapore	22.56	22.61	24.26
Penang	26.17	32.32	36.86
Malacca	2.89	2.58	2.47
Unfederated Malay States	.26	.30	.28
United Kingdom	18.62	18.22	10.69
British Possessions	1.22	1.08	1.06
United States of America	24.76	19.15	20.14
Other Foreign Countries	3.52	3.74	4.24
	100%	100%	100%

The total revenue collected by the Customs, Excise and Chandu Branches of the Trade and Customs Department amounted to $44,268,077. This figure shews a decrease of $8,972,702 on the revenue collected for the previous year. Revenue from Customs, etc.

Import duties contributed $8,821,237 as against $8,947,779 in 1927. Export duties aggregated $20,010,346, a decrease of $6,496,126 as compared with the previous year. Excise duties, licences, etc., produced $2,475,005, a decrease of $146,064 as compared with 1927.

Opium. The nett revenue from the Chandu Monopoly was $12,717,567 as compared with $14,950,000 for 1927. The decrease is partly attributable to the depression caused by the fall in the prices of tin and rubber.

Preventive Fleet. Nine launches were in commission until the beginning of May. Consequent on the announcement of the withdrawal of restriction and the fall in the price of rubber, the smuggling of rubber practically ceased. The preventive launches were gradually withdrawn from commission, the last being withdrawn on 31st October, 1928.

Shipping. The total number of vessels, exclusive of native craft, entered and cleared at the various ports of the Federated Malay States was 11,672 with a tonnage of 7,104,610, shewing an increase in number and tonnage of 995 and 76,696, respectively, when compared with the figures for the year 1927.

The number of ocean-going steamers, which entered Port Swettenham during the year, was 665 with a tonnage of 2,542,027 against 652 with a tonnage of 2,500,383 in 1927. The number of local steamers entering the port was 849 with a total tonnage of 385,038 against 842 with a tonnage of 407,566 in the previous year. The number of ocean-going vessels, which came alongside the wharf, was 315 as against 161 in 1927 and 21 in 1926. This shows that the disinclination of masters of vessels to use the wharf has to a large extent been overcome.

COMPANIES.

During the year, 45 local companies with a total nominal capital of $37,665,613 were incorporated and registered as compared with 48 companies ($25,008,570) in 1927, 56 companies ($35,764,500) in 1926, and 38 companies ($19,285,166) in 1925.

The objects of the new local companies were rubber planting (8), mining (15), mining and rubber planting (3), general trading (2) and engineering (4), tea and coffee, broking, electrical, and printing and publishing (two each), oil palm, cocoanut planting, financing, brick making and cinema (one each).

The number of companies in liquidation in 1928 was 18, and during the year two local companies were struck off the register as defunct.

There were 620 companies on the register at the end of the year.

BANKRUPTCY.

During the year, 160 bankruptcy notices were issued, 68 bankruptcy petitions filed, 47 receiving orders and 48 adjudication orders made.

Of the 48 persons adjudged bankrupt during the year 22 were Chinese, 21 natives of India, two Eurasians, one European and two Malays. By occupation four were miners, one share-broker, 13 traders, six clerks, one watchman, five carters, seven Government servants, two merchants, two contractors, one landowner, one artisan and five miscellaneous.

There was an increase in the work in the States of Perak and Selangor as compared with the preceding year.

Four compositions were approved by the Court.

There was one criminal proceeding in bankruptcy.

Seventeen applications were made for discharge, of which thirteen were granted.

CO-OPERATION.

Staff.

The European staff of the department consisted of the Director of Co-operation and two Assistant Directors of Co-operation. One Assistant Director was in charge of all societies in Perak, Province Wellesley, Penang, Kedah and Perlis, whilst the other looked after the societies in Selangor, Pahang, Negri Sembilan, Malacca and Singapore.

The Asiatic staff consisted of one Assistant Registrar of Co-operative Societies, one Auditor and Accountant, one Senior Co-operative Officer, nine Malay Co-operative Officers, two Indian Co-operative Officers, seven clerks, seven Junior Malay Co-operative Officers and three Probationers.

The difficulty which has been experienced in recruiting and training officers of suitable educational qualifications, character and experience still unfortunately continues.

Expenditure.

The expenditure, inclusive of the salaries of the European staff, was $149,637.

Progress.

The feature of the year's work has been consolidation rather than expansion. The following table reveals the position on the 30th June, 1928, which is the end of the Co-operative year:

	No. of societies.	No. of members.	Paid up share capital.	Reserve fund.	Total working capital.
			$	$	$
Agricultural Rural Credit Societies ...	96	5,428	110,927	13,317	156,224
Non-Agricultural Thrift and Loan Societies	27	12,322	1,727,287	54,721	1,784,008
Total ...	123	17,750	1,838,214	68,038	1,940,232

Rural credit societies.

In the rural credit societies there has been a slight decrease in membership. This is due to the fact that the Committees have been encouraged to eliminate unsatisfactory members whose principal object in joining a society was to obtain loans. These societies are slowly beginning to realise that a small membership of keen co-operators, who join the societies for legitimate purposes, is better than a mere show of members.

Thrift and loan societies.

The thrift and loan societies continue to make progress. Their paid up subscription has increased from $1,268,383 to $1,727,287 and the membership from 11,053 to 12,322. The surplus cash either invested or lying in the banks on the 30th June, 1928, was $721,985. The proportion of borrowers as against savers in these societies is 45 to 55 in every hundred.

Co-operative union.

During the year the first Co-operative Union in Malaya was formed in Kuala Lumpur for societies in Selangor. These Unions are the logical growth of the movement and serve as useful agencies for the co-ordination of the activities of societies, and for supervision, audit and general control as well as for the dissemination of knowledge about co-operation and the development of the movement.

Indian estate labourers, societies.

Success in the Indian Estate Labourers' Societies movement has more than exceeded original expectations. Up to the close of the financial year eight new societies were registered in Selangor and one in Negri Sembilan. The membership increased from 257 to 2,330 and the paid up share capital from $4,154 to $22,720. These societies appear to have made a special appeal to the Indian labourer, in so far as they provide him not only with an inducement to save, but also with a means of doing so. Up to the present the operations of these societies have been entirely confined to thrift.

Co-operative rubber factories.

During the period under review a European Planter was engaged to assist the officer seconded to the Co-operative Societies Department from the Agricultural Department mainly to investigate the possibilities of organising co-operative rubber factories for small holders. A large amount of preliminary work will have to be undertaken before material results can be obtained. There seems to be no doubt that the Malay small-holder should be able to obtain a better price for his rubber by co-operative production and sale than he does at present. The great difficulty will be to convince him that this extra profit is worth the change in his present methods and habits, which this form of co-operation must necessarily entail.

The Co-operative Bank of Malaya.

The proposal to convert the Planters' Loans Board into the Co-operative Bank of Malaya was considered by the Secretary of State. After reference to a special Committee in London, the Secretary of State expressed his substantial approval of the scheme subject to certain reservations. It was arranged that Mr. C. F. Strickland, I.C.S., late Registrar of Co-operative Societies in the Punjab, should be invited to visit Malaya to report and advise on co-operation generally in Malaya, and further steps to form the proposed Bank were suspended pending his arrival.

General.

No steps were undertaken during the year to develop native industries on co-operative lines, owing to the lack of a special officer to undertake this work.

The Co-operation Board, which was formed in 1926 to advise Government on all matters relating to Co-operation, met ten times during the year.

Two Conferences were held during the year; one representing the Salary Earners, was held in the Town Hall, Kuala Lumpur, on April 15th, 1928, and a Conference of the Delegates of all Malaya Rural Credit Societies in the Federated Malay States and the Straits Settlements was held in the Town Hall, Ipoh, on the 4th August, 1928, and was attended by about 150 representatives and their friends.

V.—COMMUNICATIONS.

POSTS AND TELEGRAPHS.

Postal.

There are now 103 post offices, and 65 places at which postal business is transacted by railway station-masters and others acting as postal agents.

The estimated number of articles posted and delivered in 1928 was nearly 39 millions.

Money orders.

Money orders numbering 353,444 were issued and paid, the total representing $19,092,946, an increase of 13,813 in number and a decrease of $1,629,616 in amount as compared with the preceding year. Telegraph money orders numbering 14,387 for $1,221,471 were issued and paid.

Savings Bank.

The number of Savings Bank depositors on the 31st December, 1928, was 37,036, an increase of 4,441 during the year. The average amount standing to the credit of depositors decreased from $111 to $106. The excess of deposits over withdrawals during the year was $215,852. The number of Malay depositors showed a satisfactory increase from 7,070 to 8,004.

Telegraphs.

The number of telegrams despatched and delivered was 883,272, a decrease of 97,241.

Telephones.

The total number of subscribers connected to the telephone exchanges at the end of the year was 4,534, an increase of 531 compared with 1927. There were also 2,177 extension lines, extension bells, private lines, etc., maintained by the department, an increase of 306. On the 31st December there were 2,926 miles of telegraph and telephone lines, and 23,691 miles of overhead wires, of which 20,555 miles were telephone wires. In addition there were 121 miles of underground cable, the length of single wire in the cable being 11,428 miles. These figures do not include railway wires, nor the 123 miles of line (612 miles of wire) owned and maintained by the department in Johore. Thirteen additional public telephone exchanges were opened during the year at Batu Caves, Bruas, Chemor, Gemas, Kepong, Kuantan, Mantin, Pekan, Sepang, Sungei Besi, Tanjong Tualang, Temoh and Trong. Many new trunk and junction lines were established to connect these exchanges with the system and to meet increased traffic. The trunk telephone revenue was $384,914 or over 21 per cent. greater than in 1927. The general telephone revenue was $1,196,884, an increase of more than 12 per cent. over the figures for 1927.

The building plans of the new Kuala Lumpur Telephone Exchange had been finally approved, and a specification for new (automatic) plant forwarded to the Crown Agents before the end of the year.

Carrier current apparatus (commonly known as "wired-wireless") arrived in December which, when erected, will provide three additional telephone channels between Kuala Lumpur and Ipoh. This will result in a marked increase of facilities.

Financial.

The nett revenue collected by the department was $2,919,981, an increase of $163,795. Annually recurrent expenditure amounted to $2,220,968, and special expenditure (including loan account) to $1,051,425. The value of the services performed free of charge for other Government Departments, estimated at $208,102, is not included in these figures, which also exclude temporary and acting allowances amounting to $211,514.

Wireless.

Wireless telegraphy stations were installed on a temporary basis at Kuala Lumpur, Kuantan, Kuala Lipis, Kuala Pahang, Temerloh and Mentakab to meet the contingency of floods in Pahang. The contingency actually arose at the close of the year, and the whole of the traffic with Trengganu and Eastern Pahang was cleared by wireless to Kuantan from the 24th to the 31st December. The number of telegrams so sent was 915, exclusive of a number of Government and Service messages.

The Posts and Telegraphs Department took over from the Customs Department at the end of July the Port Swettenham Wireless Station and the wireless apparatus which had belonged to the Rubber Restriction Preventive Fleet. Four of these sets, converted to short-wave working, were used in the Pahang Flood Scheme. The Port Swettenham Station was put in good order with a view to its utilization for a ship-to-shore service.

Air mails.

Arrangements were made as from the 6th October, for correspondence addressed to Great Britain and Ireland to be transmitted, on payment of a special fee, by air mail between Marseilles and London. A special mail for Europe was arranged to connect with the Dutch aeroplane, which left Medan for Amsterdam on the 4th November.

RAILWAYS.

General.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from

Johore Bahru at the southern extremity of the Peninsula and opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. At Gemas, the line branches into the West Coast and the East Coast lines: the West Coast Line runs north-north-west through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang harbour—about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier Station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on July 1st, 1918, the distance between Singapore and Bangkok being 1,188 miles.

The East Coast Line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, in Kelantan. It is completed and opened for traffic as far as Merapoh Station, 43 miles beyond Kuala Lipis, the capital of Pahang, 184½ miles from Gemas and 321½ miles from Singapore. Merapoh is the last station in Pahang territory and is about three miles from the frontier. By the close of the year permanent way had been laid to about 16 miles beyond the Kelantan frontier. At the other end a section of 63 miles extending from Tumpat—the port of Kelantan—to Manek Urai at the crossing of the Lebir has been completed and opened for traffic. This line when extended southward will meet the line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Manek Urai towards Pahang. A branch line 13 miles long has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, where it joins the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on November 1st, 1921.

Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld.

Other branch lines owned by the system are Ipoh-Tronoh, 15 miles, in Perak, Kuang-Batang Berjuntai, 14 miles, Kuala Lumpur-Batu Caves, seven miles, Sungei Besi-Sultan Street, eight miles, Sultan Street-Ampang, six miles, Connaught Bridge Junction-Kuala Selangor, 30 miles, all in Selangor, and Bahau-Kuala Pilah, 13 miles, in Negri Sembilan.

At Prai on the mainland opposite Penang, certain work on the wharves has been carried out. A causeway to carry two lines of rails and a roadway has been built across the Johore Strait connecting the Island of Singapore with the mainland.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,037 miles. The line is of metre gauge. On the mail trains on the West Coast main line there are sleeping saloons and restaurant cars. There are 256 permanent stations and 37 flag stations.

Financial.

The expenditure on capital account (including lines not yet open for traffic) was $219,150,677 up to 31st December, 1928, of which $171,763,856 was met from revenue and $47,386,821 from loan account.

The receipts in 1928 from all sources were $22,347,560, a decrease of 3.07 per cent., whilst expenditure chargeable to revenue on all accounts amounted to $19,755,851, an increase of 1.57 per cent. The nett surplus for the year's working therefore amounted to $2,591,709 compared with $3,606,012 in 1927. This surplus together with an amount of $2,642,045 contributed by the Federated Malay States Government has been transferred to reserve as a contribution to the Railway Renewals Fund.

Rates.

There were no changes in the general rates and fares during the year.

Train control.

A system of train control introduced in January, 1922, over a busy section of the line covering 105 miles has proved very satisfactory in controlling the movement of rolling stock, checking unnecessary haulage and in case of breaches on the line expeditiously restoring communication. With the introduction of this system an enormous number of telegrams has been saved. The system has been extended and now controls the main line between Prai and Gemas (351 miles).

Passengers.

The number or ordinary passengers carried was 14,171,105 in 1927 and 13,475,070 in 1928. The total receipts from passengers shew a decrease of $851,319 (9.56 per cent.). This may be ascribed in a large measure to the increase of motor traffic.

Goods.

The receipts from goods train traffic rose by $174,685 from $10,188,463 to $10,363,148.

Capital expenditure.

During the year the nett expenditure on capital account was $7,569,315 as compared with $6,439,767 in 1927.

In Kelantan at the north end platelaying was completed to the 74th mile, i.e., 11 miles beyond Manek Urai and from the 76th to 82nd mile besides the 16 miles mentioned above near the Pahang boundary. The distance between rail heads in Kelantan at the end of the year was about 44 miles. Earthwork, etc., is well in hand over the whole section. Two tunnels at the 69th mile (from Tumpat) 1,143 feet in length and one of 502 feet at 73½ mile have been completed. Out of the six tunnels between the 74th mile and 85th mile, work has well advanced in three and a commencement has been made on one. Work on the tunnel at the 94th mile has been temporarily closed down. The nett expenditure on this section during the year amounted to $3,510,962. Construction

The new Connaught Bridge of three spans of 200 feet at Klang has been completed. Work on the Kuala Lumpur deviation and the doubling of the line from Batu Junction to Kuala Lumpur including ,a double line tunnel under Police Head-quarters at Kuala Lumpur, has been completed and opened for traffic. The work on Victory Avenue between the Railway Offices and the Chartered Bank has also been completed and opened for traffic.

A housing scheme for the Railway subordinate, artisan and menial staff estimated to cost $4,765,000 was commenced in 1926 and on 31st December, 1928, 649 units had been completed and 801 units were in hand. The main portion of the scheme is the railway settlement at Sentul, near Kuala Lumpur. The scheme provides 760 additional units. Other works.

As a result of heavy and continual rain in the Kelantan and Pahang districts during the latter part of December, the line was badly flooded, and several bank slips occurred, which resulted in some disorganisation of the train service and the closing temporarily of certain sections of the line in both districts.

The Railway Board held 12 meetings during the year. It is composed of three official and six unofficial members; of the unofficials two were appointed from the Colony, one residing in Singapore and the other in Penang. Railway Board.

ROADS.

The total mileage of metalled roads at the end of the year was 2,665, an increase of 65, and they were maintained at an average cost of $1,447 per mile—a slight decrease as compared with 1927.

The policy of surfacing roads with bitumen is being steadily continued, the proportion of roads thus treated being approximately 43 per cent.

Floods of some magnitude occurred during the year in parts of the country and damage was done to the Enggor pontoon bridge in Perak, while a newly erected bridge over the Lepar River on the Benta Kuantan Road, Pahang, was broken by uprooted trees and washed away by the floods.

A considerable amount of new road construction was done during the year, while existing roads were in many places widened and straightened. The standard of roads in the Federation is very high and has entailed very heavy expenditure. Work for some time to come must be confined to maintenance rather than to improvements.

A number of new bridges were also commenced amongst which may be noted a new bridge over the Perak River at Enggor, the replacement of the old ferry at Blanja by a pontoon bridge, and the reconstruction of the Market Street Bridge, Kuala Lumpur; also a reinforced concrete bridge of 150 feet span over the Selangor River at Rasa. The total expenditure under Special Services, Roads, Streets and Bridges during the year was $7,575,200.

VI.—POLICE AND PRISONS.

POLICE.

Staff.

Malay recruits offered in much greater numbers than usual but many of them were of poor physique and had little education. It was possible, however, to fill all vacancies in the Malay Contingent, there being actually an excess of one Malay Constable at the end of the year.

There was no difficulty in securing all the Indian recruits required.

Nine Probationary Assistant Commissioners, 14 Probationary British Inspectors and 9 Probationary Asiatic Inspectors were appointed during the year. The total casualties were 12 British Officers, 3 Asiatic Officers and 382 Malays and Indians (including Detectives and Veterinary).

Instruction.

The instruction in Drill at the Depot was maintained at the high level of previous years and a distinct advance was made in instruction in law, police duties and in Romanized Malay. It is hoped that the advance in this direction will be further accelerated when additional assistance is obtained from the Education Department.

The winning of the "Warren Shield" by a Depot team under Sebadar Major Cherag Din at Taiping in August, 1928, was a very fine achievement, of which the Force has some reason to feel proud.

Health.

The health of the Force during the year may be considered satisfactory. The hospital figures for Perak and Selangor show a distinct improvement on 1927, but the figures for Pahang show a slight increase.

Crime.

The year's total of serious crime, which includes murder, gang-robbery and robbery only, may be considered satisfactory, the number being two less than that of the previous year, in spite of a slump in the price of both rubber and tin in Malaya and of chaotic conditions in China, the repercussions from which were bound to be felt in this country.

The figures for the past five years were as follows:

1924—178
1925—144
1926—112 Average for the five years 150.
1927—160
1928—157

The figures for the preceding five years were:

1919—453
1920—368
1921—542 Average for the five years 371.
1922—297
1923—198

An analysis of the figure for the year as compared with previous years discloses the fact that, while the number of murders has decreased, the number of gang-robberies and robberies have increased. The combination of the influx of ex-soldiers and bandits from China and the local economic depression rendered a rise in the robbery figures almost inevitable. It says much for the present system of control of serious crime that for the fourth consecutive year the country was free of any organised gang of robbers.

There were 63 murders during 1928, of which 8 were committed in the course of robbery as compared with 86 murders in the previous year, of which 11 were accompanied by robbery.

Of the above 63 cases of murders, 32 were successfully investigated.

An analysis of the motives for the murders reported during the year, as far as they can be ascertained shows "Sexual Jealousy" as usual heading the list (17 cases) followed by "Revenge" (13 cases). Next in order come "Quarrels" (12 cases) and "Gain" (robbery) (8 cases).

There were 26 cases of gang-robbery during the year, which is an increase of 11 over the previous year.

In 12 cases of gang-robbery the Police were successful in their investigations. It was not possible in every case to obtain sufficient evidence to institute a prosecution and in certain cases banishment was asked for. Suspects against whom sufficient evidence could not be collected to ensure their banishment were registered by finger-prints description and photographs and indexed on the *modus operandi* index, criminal history sheets being opened for them for future reference.

Robberies numbered 68, an increase of 9 over the 1927 figures. In 32 cases the police investigations were successful. Most of these robberies were in no way serious.

The totals of seizable crime for the past five years are as follows:

1924—8,508
1925—7,361
1926—5,641 } Average for the five years 6,762.
1927—5,063
1928—7,239

The details for house-breakings and thefts were as follows:

	House-breakings.	Thefts.
1924	195	6,200
1925	205	5,439
1926	425	3,712
1927	584	3,022
1928	800	3,653

It will be noticed that the recorded house-breakings show a steady increase. This is believed to be partly due to the fact that the classification has gradually become more exact, more house-breakings being correctly classified as such and not loosely classified as thefts. It will be noticed that the theft figures up to 1927 have decreased as those for house-breakings have increased. In 1928 the classification of house-breakings is believed to be absolutely exact. In that year however both house-breakings and thefts increased. "House-breakings" will probably be the Malayan policemen's most serious problem during the next few years and well-considered and well-planned preventive measures will have to be energetically employed by all officers concerned to keep this class of crime in check.

Criminal Intelligence.

Good work, both on the criminal and political side was done by the Detective Branches. The average number of cases per detective was 20 in Perak, 34 in Selangor, 25 in Negri Sembilan and 27 in Pahang.

The Criminal Intelligence Branch developed considerably during the year and the former *modus operandi* system was replaced by a modified form of the Scotland Yard system. Good progress was made with the registration and surveillance of bad characters and suspects.

The Criminal Registry was severely taxed during the year and it was with the greatest difficulty that the Registrar and his staff kept abreast of the large volume of work to be dealt with.

PRISONS.

Statistics.

There are six prisons in the Federated Malay States. On the 1st January, 1928, they contained 1,123 prisoners against 944 on the 1st January, 1927; during the year, 6,270 were admitted; and 1,092 remained at the close of the year. The daily average figures were: Civil Prison, 151; short sentence and revenue grade, 536; long sentence and condemned, 463. Nine executions were carried out. Four prisoners escaped. Two prisoners committed suicide. The daily average of sick was 1.88 as compared with 2.00 in 1927. There were 18 deaths, of which 4 were from valvular disease of the heart, 1 from malaria, 3 from phthisis, 1 from pneumonia, 1 from heart failure and 8 from other causes.

Expenditure.

The total expenditure of the department was $497,463. The daily average of 1,150 prisoners was maintained at a nett cost of $427,128, giving an annual cost per head of $371. The annual cost in 1927 was $409 and in 1926 $396. The decrease was principally due to increased revenue from industries and an increase in the number of prisoners.

Works.

The additional workshop at the Convict Establishment, Taiping, which was partially completed in 1927, was completed in the early part of the year.

VII.—PUBLIC WORKS.*

General expenditure.

The total expenditure for the year, under all heads, was $31,397,517, an increase of $10,309,574 or 48.9 per cent., over the previous record of 1927.

A total number of 1,596 items were authorised under Special Services and of these 1,343 or 84.15 per cent. were completed during the year, and 236 or 14.78 were carried forward under approved schemes leaving only 21 items or 1.31 per cent. on which a commencement had not been made.

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* Roads are dealt with under Part V.

This record is very creditable to the department. There were considerable arrears to be overtaken and the above figures show the success achieved.

The total cost of administration was $2,180,512 or 6.9 per cent. on the total expenditure.

The total expenditure under Annually Recurrent amounted to $8,587,934.

Buildings.

The annual maintenance of Works and Buildings cost $1,333,225 representing 2.72 per cent. of the value of the buildings as against 3.10 per cent. of the previous year.

Eleven hundred and fifty-two new buildings were erected during the year, amongst these being fifty-eight quarters for senior officers and three hundred for subordinates.

The total number of buildings existing at the beginning of the year was ten thousand, eight hundred and fifty-one valued at $42,042,330. Of these buildings, seven hundred and ninety-nine were quarters for senior officers and three thousand seven hundred and sixty-seven quarters for subordinate officers.

Buildings completed during the year include the Clifford English School, Kuala Kangsar, and the Supreme Court, Ipoh. In Kuala Lumpur, a new building for the Institute of Medical Research and the Chinese Free School were completed, as also the King George V English School at Seremban.

Good progress was made on the Central Decrepit Camp, the Leper Asylum at Sungei Buloh and the new Victoria Institution.

Work was commenced on a new Operating Theatre and Trade School at Ipoh and English Schools at Kuala Lumpur, Klang and Kajang.

Waterworks.

The capital cost of all waterworks is $14,157,804, the cost of maintenance for the year being $219,966 and the revenue $698,208.

Prices and labour.

Prices remained at a steady level during the year and there was a sufficiency of labour throughout the country.

ELECTRICAL SUPPLY.

General.

The year 1928 has been one of remarkable development in the generation and application of electricity throughout the Federated Malay States.

The total capacity of plant installed in the Federated Malay States for the generation of electricity was 65,162 kilowatts, compared with 42,445 kilowatts in 1927 and 29,477 kilowatts in 1926.

The total number of units generated by the above plant in 1928 was 129,969,677. Of these units 17,550,067 were generated by Government undertakings, the remainder by private undertakings.

Units produced by plants of under 100 kilowatts capacity are not included in the above figures.

The employment of plant subject to the Electricity Enactment in kilowatts is as follows:

State.	Mining.	Agri-cultural.	General.	Govern-ment.	Total.
Perak	25,321	246	12,560	1,510	39,637
Selangor	9,989	31	360	9,594	19,974
Negri Sembilan ...	9	51	13	870	943
Pahang	4,423	130	55	...	4,608
Year 1928	39,742	458	12,988	11,974	65,162
„ 1927	30,536	385	551	10,973	42,445
„ 1926	24,336	316	340	4,485	29,477

The units generated by prime movers were as follows:

	Perak.	Selangor.	Negri Sembilan.	Pahang.	Total.
Water power ...	23,171,810	...	...	4,101,885	27,273,695
Steam plant ...	23,469,656	30,051,454	...	5,283,822	58,804,932
Internal combustion engines	27,392,924	15,353,978	869,836	274,312	43,891,050
					129,969,677

The increase in plant installed in kilowatts during 1928 amounts to 53.3 per cent. for the whole of the Federated Malay States.

The large increase in electric power demand necessitates the employment of qualified men in accordance with the Rules and Regulations of the Electricity Enactment, and there is a scarcity of such men as Wiremen, Chargemen, and First, Second and Third Grade Electrical Engineers. It is hoped that the Trade Schools will help to remedy this.

Examinations.

During the year examinations were held in Kuala Lumpur, Ipoh, and Seremban, at which 294 candidates of various grades were examined. One hundred and seventeen passes, 158 restricted certificates and 19 failures were recorded.

Accidents.

Eleven accidents were reported and investigated during the year; of these, six were fatal. The non-fatal accidents were due in every case either to carelessness or excess of zeal on the part of semi-skilled workmen.

Technical subordinates.

It is hoped in the near future to make arrangements for the instruction of Technical Subordinates by instituting classes at which all probationers and apprentices are compelled to attend.

VIII.—PUBLIC HEALTH.

VITAL STATISTICS.

opulation.

The last census was made in 1921. The figures shown for the present year are estimated at a rate of increase deduced from previous records. Since immigration and emigration of labourers and their dependents have not been completely tabulated, yet are important and very variable factors in population variation, the estimates of population are not entirely trustworthy.

The population of the Federated Malay States as estimated at the end of June, 1928, was 1,533,612 distributed as follows:

Perak	675,179
Selangor	478,565
Negri Sembilan	213,971
Pahang	165,597

Assuming that the races remain in the same proportion as in the census year, the race distribution is as follows:

State.	Europeans and Americans.	Eurasians.	Malays and other natives of the Archipelago.	Chinese.	Indians.	Others.
Perak	2,519	1,066	268,196	229,937	171,493	1,968
Selangor	3,278	1,843	111,242	185,027	174,942	2,233
Negri Sembilan ...	1,250	559	83,378	82,809	44,830	1,145
Pahang	382	143	113,227	41,217	10,202	726
TOTAL ...	7,429	3,611	576,043	538,990	401,467	6,072

Births.

Fifty-two thousand seven hundred and seventy-one births were registered during the year, giving a birth-rate of 34.41 per mille of population as against 48,013 births and a birth-rate of 31.91 in 1927.

The following table shows the number of births and birth-rates according to races:

Race.	No. of births.		Birth-rate.
Europeans and Americans ...	148	...	19.92
Eurasians	127	...	35.17
Malays and other races of the Archipelago	22,042	...	38.26
Chinese	19,067	...	35.38
Indians	11,315	...	28.18
Others	72	...	11.86

Deaths.

Forty-five thousand four hundred and thirty-seven deaths were registered, giving a death-rate of 29.63 per mille. The number of deaths in 1927 was 48,323 and the rate was 32.11.

The distribution of deaths among the several races was as follows:

Race.	No. of deaths.		Death-rate.
Europeans and Americans ...	41	...	5.52
Eurasians	48	...	13.29
Malays and other races of the Archipelago	14,405	...	25.00
Chinese	16,909	...	31.37
Indians	13,948	...	34.74
Others	86	...	14.16

The following table shows the deaths and death-rates from principal diseases:

State.	Malaria.			Dysentery and diarrhoea.			Pulmonary tuberculosis			Beri-beri.		
	Deaths.	Rate.		Deaths.	Rate.		Deaths.	Rate.		Deaths.	Rate.	
		1928.	1927.		1928.	1927.		1928.	1927.		1928.	1927.
Perak ...	8,438	12.50	13.62	883	1.31	1.63	900	1.33	1.37	134	0.20	0.35
Selangor ...	5,033	10.52	10.67	1,181	2.47	2.60	686	1.43	1.31	218	0.45	0.54
N. Sembilan ...	2,948	13.78	14.58	519	2.42	3.09	280	1.31	1.62	96	0.45	0.68
Pahang ...	3,634	21.90	22.33	317	1.91	3.09	111	0.67	0.92	172	1.04	2.59

INFANT MORTALITY.

The number of reported deaths of children under one year of age was 9,610, an infantile mortality rate per thousand births of 182.11, against a mortality rate of 203.11 in 1927. The death-rates for the four States were:

State.		Deaths of children under one year.		Death-rate per 1,000 births.
Perak	...	3,691	...	161.52
Selangor ...	...	3,041	...	169.31
Negri Sembilan	..	1,443	...	211.49
Pahang ...	...	1,435	...	279.40
Total	...	9,610	...	182.11

PUBLIC HEALTH.

General remarks.

The general health of the country may be considered as having improved during the year under reveiw, since the death-rate was 29.63 per mille as against 32.11 for the previous year. The rate for the year 1926 was 29.32.

It may be noted from the tables of Vital Statistics above that the rate for Malays is well below the figures for Chinese and Indians: that the States of Perak and Selangor compare favourably with Negri Sembilan, and very favourably with Pahang: that the corrected death-rate for the large towns, with the exception of Taiping, is well below that for the country generally, the rate for Ipoh being less than half, and for Kuala Lumpur only just over two-thirds. The figures for the Indian population of Negri Sembilan and Pahang continue to be high.

The birth-rate shows an improvement on 1927 in each State with the exception of Pahang, the highest figures recorded being those for the Malays of Selangor, Malays of Negri Sembilan, and the Chinese of Selangor.

Infantile mortality shows an improvement all round, there being more than ten per cent. reduction in Perak and Selangor. It is, however, still high; very high in Negri Sembilan and higher still in Pahang.

During the year there was no outbreak of epidemic disease. There was a general increase in the number of sick treated at Government hospitals, both in-door and out-door, in all the

States except Pahang, where the number of in-patients was lower than during the previous year though the number of out-patients was considerably higher. The reduction of in-patients in Pahang and the lowered death-rate of 37.60 per mille as against 43.82 for 1927 may be ascribed to the fact that the conditions caused by the floods of 1926 and 1927 have greatly improved.

General European population.

The general health of the European population continued to be good.

The total European and American population, as estimated at the end of December, 1928, was 7,429.

There were 148 births, a birth-rate of 19.92 per mille, and 41 deaths, a death-rate of 5.52 per mille; as compared with a birth-rate of 16.56 per mille, and a death-rate of 4.87 per mille, for the previous year.

Malaria.

Malaria continues to be the chief cause of sickness and death in the Federated Malay States.

The total number of deaths attributed to fever described as "malaria" was 20,053, a reduction of 683 from the previous year. There were 50,290 cases treated in Government hospitals; some of these were readmissions. Deaths in hospitals from malaria numbered 2,637, showing a death-rate of 5.24 per cent.

The figures for malaria treated in hospitals for the last four years are as under:

Years.	Cases.	Deaths.	Death-rate per cent.
1925	23,056	993	4.31
1926	38,633	1,792	4.64
1927	49,452	2,543	5.16
1928	50,290	2,637	5.24

A number of anti-malarial works were carried out by the Public Works Department.

Blackwater fever.

There were 21 cases of blackwater fever with eight deaths, as compared with eight cases and three deaths in 1927. Twelve of these cases, of which three were fatal, occurred in Negri Sembilan. Malarial parasites were detected in the blood of five cases.

Pulmonary tuberculosis.

The number of cases of pulmonary tuberculosis treated in hospitals during the year was 2,452, with 1,074 deaths and a death-rate of 43.80 per cent., as compared with 2,413 cases with 1,118 deaths and a death-rate of 46.33 for the year 1927. The death-rate remains high; but this is understandable, as the majority of patients only come into hospital when in the last stages of the disease.

The number of deaths reported throughout the country as due to pulmonary tuberculosis was 1,977: the numbers annually reported for the last six years have remained remarkably constant about the figure of 2,000.

Yaws.

The treatment of yaws by arsenical compounds was continued. A total number of 30,227 injections were given during the period under review. The number of cases treated in each State, in comparison with the numbers treated in 1924, 1925, 1926 and 1927, is shown in the following table:

State.	1924.	1925.	1926.	1927.	1928.
Perak	9,884	9,155	9,358	2,307	10,007
Selangor	2,231	1,305	1,680	2,504	1,999
Negri Sembilan ...	7,267	6,426	4,543	4,465	4,280
Pahang	3,997	9,403	7,893	3,913	3,286
Total ...	23,379	26,289	23,474	13,189	19,572

It is believed that the systematic efforts which have been made to eradicate this disease have resulted in a marked decrease in its incidence.

Leprosy.

There were 303 fresh admissions and 69 deaths from leprosy during the year. In the Leper Asylum at Kuala Lumpur the total number of lepers treated was 1,014, as against 818 for the previous year: there were only 58 deaths. This institution has now become much overcrowded, and it is hoped shortly to effect its removal to the new site at Sungei Buloh. In the meantime the care and treatment of the patients has been carried out with great success, and the general welfare of the leper community has attained a higher standard.

At the Malay Leper Settlement at Pulau Pangkor Laut, 63 cases were treated, with six deaths. The special leper wards at Taiping have been closed, as they were entirely unsuitable for the accommodation of lepers. Cases from Perak are now sent to the Settlement at Kuala Lumpur. At the end of the year 127 lepers from Perak were still accommodated at Pulau Jerejak, under the control of the Straits Settlements.

Cancer.

The number of cases admitted and treated in hospitals under the heading of "cancer or other malignant tumours" was 314 with 130 deaths.

Cholera.

It is satisfactory to report that no case of cholera occurred during the year in the Federated Malay States.

There were five cases of plague, all fatal, in Perak during the year, as compared with 33 cases and 30 deaths throughout the country in 1927. **Plague.**

The number of cases diagnosed as tropical typhus was 57, with three deaths. This disease is being closely investigated by the staff of the Institute for Medical Research, and it is hoped that further knowledge may shortly be obtained on the vexed question of the aetiology of this disease. **Typhus.**

Ten cases of smallpox occurred in the district of Ulu Langat in Selangor: there were no deaths. **Smallpox.**

The number of cases of beri-beri treated in hospitals was 2,098 with 239 deaths and a death-rate of 11.39, as compared with 2,782 cases with 447 deaths and a death-rate of 16.07 for the year 1927. The total number of deaths reported throughout the country was 620. The decrease in the incidence of this disease was most marked in Pahang, and was probably due to the fact that fresh vegetables and home-grown *padi* were once more available. There was a great shortage of these in the previous year owing to the destruction of vegetable gardens and *padi* crops by the floods which occurred in 1926 and early 1927. **Beri-beri.**

The preparation of vitamin B extract was continued at the Institute for Medical Research, and supplies were issued to the hospitals for treatment of cases. Experiments were carried out at the Institute for Medical Research with the object of supplying the extract in tabloid form instead of as a fluid.

There was a great increase in the number of cases of venereal diseases which received treatment at hospitals and clinics, the total number recorded being 35,366, as compared with 25,744 during the preceding year. This increase is probably due in a large measure to the fact that the victims show much more readiness for proper treatment than heretofore. **Venereal diseases.**

Propaganda by means of illustrated lectures was continued, and educational pamphlets in five languages were widely distributed among all races.

The number of treatment centres at the end of the year was 59.

INFANT WELFARE WORK.

During the year a new infant welfare centre was opened at Klang; after being in operation for only six months its influence had extended so widely that 470 competitors were entered for the first Baby Show.

The work at the other older-established centres continued to flourish.

The number of attendances at centres throughout the country for each of the last three years is shown hereunder:

1926.		1927.		1928.
61,365	...	92,476	...	118,257

A large part of the work is not purely infant welfare, for it is impossible to avoid ordinary out-patient treatment for minor ailments of women and children: but since this work is directly calculated to gain the confidence of the mothers and has at least an indirect bearing on infant welfare, it is all to the good.

An important part of the work of a centre consists of visits by European Sisters or other Health Visitors to women and children in their homes. The number of such visits made during the year was recorded as 71,631, of which over 21,000 were made by European Sisters. The total number of visits in the preceding year was recorded as 57,959.

The marked decline in infantile mortality during the last few years can justifiably be attributed at least in part to the excellent work of the Infant Welfare Centres.

INSPECTION OF SCHOOLS.

School inspection is mainly carried out by officers of the Health Branch, but is shared by Medical Officers and others such as Assistant Surgeons when on duty with travelling dispensaries.

Of 26,485 children examined, 15.35 per cent. were found to have enlargement of the spleen: the rates for Negri Sembilan and Pahang were much higher than for Perak and Selangor.

The appointment of a Lady Medical Inspector of Schools has marked the commencement of school inspection work on a systematic basis. The experience which is being gained as the result of this appointment, and the prospect of further appointments for this special duty, promise real progress in this most important branch of health work.

PUBLIC HEALTH EDUCATION.

The Committee for Public Health Education continues its activities. Health exhibitions were held at the Agri-Horticultural Shows at Ipoh, Taiping and Teluk Anson, and these were well attended. Lectures were given, and pamphlets in various languages, which had been prepared by the Committee, were distributed in large numbers.

The 1928 Malayan Exhibition was held on the Ipoh Race Course from 3rd to 6th August. A Public Health Section was arranged by the Malaria Advisory Board, in conjunction with the

Committee for Public Health Education and the Infant Welfare Advisory Board, the Institute for Medical Research, and the Venereal Diseases Specialist.

As this was the first occasion on which there had been an exhibition on so large a scale at Ipoh, there was a great number of visitors from all parts of the country, the official attendance for the four days of the exhibition being approximately 40,000.

Popular lectures on malaria were given in Malay and Chinese in various parts of the country; these were illustrated by lantern slides, and were well attended. Other lantern lectures on the dangers of venereal diseases were also given.

A cinematograph film of work done at the Infant Welfare Centre, Kuala Lumpur, was exhibited on several occasions to large and interested audiences of various nationalities.

QUARANTINE AND PORT HEALTH WORK.

A great part of the immigration into Malaya is through the ports of Singapore and Penang, both in the Straits Settlements. The Medical Department of the Federated Malay States is chiefly concerned with Port Swettenham, which admits large numbers of Indian labourers. Of forty-six ships arriving at this Port during the year, seven were infected, including four with smallpox and one with cholera.

The total of immigrants passed through the Quarantine Camp at Port Swettenham was much lower than in the years immediately previous.

MEDICAL INSTITUTIONS.

There were on the 31st December, 1928, in the Federated Malay States, the following medical institutions:

4 European Hospitals;
34 District Hospitals (each with an Outdoor Dispensary);
3 Women's Hospitals;
2 Leper Asylums;
5 Gaol Hospitals;
1 Quarantine Camp;
4 Vagrant or Decrepit Wards;
1 Mental Hospital;
1 Pasteur Institute (attached to the Institute for Medical Research);
30 Dispensaries working in towns, distinct from hospitals;
5 Infant Welfare Centres;
5 Venereal Diseases Clinics.

HOSPITALS, DISPENSARIES AND OTHER INSTITUTIONS.

In-patients. The number of in-patients treated in Government hospitals was 143,361, with 11,329 deaths and a death-rate of 7.90, as compared with 142,094 with 11,743 deaths and a death-rate of 8.26 in 1927.

Dispensaries and out-patients. The number of out-patients treated in all hospitals, dispensaries, travelling dispensaries and dispensary boats for 1928 was 895,948 as compared with 789,764 in 1927 and 630,052 in 1926.

The following figures show the number treated during the last four years:

State.	1925.	1926.	1927.	1928.
Perak ...	216,282 ...	210,511 ...	292,087 ...	347,428
Selangor ...	219,739 ...	227,864 ...	286,843 ...	307,449
N. Sembilan	99,047 ...	101,652 ...	108,314 ...	127,970
Pahang ...	86,725 ...	90,025 ...	102,520 ...	113,101
Total ...	621,793 ...	630,052 ...	789,764 ...	895,948

Of the total of 895,948 cases, 200,168 were treated by the travelling dispensaries and 36,254 by dispensary boats on the Perak and Pahang rivers.

The two motor dispensary boats, "Bomor" and "Pawang", continued this work on the Perak and Pahang rivers. By carrying out regular trips, it was possible for the Medical Officer or Lady Medical Officer detailed for the duty to visit *kampongs* along the river banks at pre-arranged times, and so to attend to the patients who had assembled at the landing place. Opportunity was also afforded for inspecting schools, while occasionally visits to sick persons in their own houses were requested.

Mental diseases. There were at the end of 1928, 1,721 male and 490 female patients at the Central Mental Hospital. The total admissions during the year were 903, while the discharges numbered 495: the figure does not include 189 patients transferred to the new Singapore Mental Hospital. Of the 495 patients discharged, 358 were discharged recovered, 83 as relieved, 2 as not insane and the remaining 52 as "not improved".

The recovery rate has increased from 32.17 in 1926 to 41.84 in 1928.

Pasteur Institute. There was a great increase in the work of the Pasteur Institute in 1928. The number of animal brains submitted for examination for rabies was 157 as against 83 in 1927: of this number 85 were diagnosed as positive. The number of persons treated was 198 as against 123 in 1927, and the number of dogs vaccinated was 1,981 as compared with 322 in 1927.

IX.—EDUCATION.

Financial. The expenditure upon Education (including $1,340,686 spent by the Public Works Department on the building and upkeep of schools) was $4,308,363. Of this sum, $488,708 was paid in grants to English aided schools and $71,284 in grants to Chinese vernacular schools.

The total revenue, derived mainly from school-fees, collected by the department was $164,984. In addition the Education Rate realised $119,375.

Staff. Five European Masters and six mistresses were recruited for the Federated Malay States. Two European Masters died.

At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 44 and the female 9. This included administrative and teaching staff.

There are still vacancies to be filled to allow for the increasing number of schools and of officers lent to the Unfederated Malay States and for officers on leave.

Three of the four European specialist posts created in 1926 still remained vacant for want of candidates, viz., a Federal Art Master, an Art Master for Perak and an Assistant Inspector of Tamil Schools.

Higher Education. One of the highest local educational institutions open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore.

The other is Raffles College, which will provide a higher education in subjects other than medicine. The College opened informally in June, 1928. During the year the Federal Government agreed to defray the cost of another hall of residence for students from the Federated Malay States. Sixteen such students joined the College when it opened.

The Malay College, Kuala Kangsar, trains probationers for the Government service.

Plans were passed for a School of Agriculture at Serdang, with a view to providing practical and scientific courses in agriculture.

Evening classes. Evening classes continued to be held in all the States. In Perak and Negri Sembilan again the only classes in demand were those for elementary English. In Kuala Lumpur the curriculum comprised English, shorthand, book-keeping, typewriting, mathematics, machine drawing, electricity, locomotive and electrical engineering, workshop mechanics, surveying, art and Malay. Attendance on the whole was fair. In Pahang there were classes in English and typewriting.

There were Normal Classes for teachers in all the States except Pahang, where correspondence classes take their place. At an Education Conference held during the year certain proposals were discussed for the improvement of these classes.

Scholarships and free education. Of the 16,448 pupils in English Schools, 420 held Government scholarships, enjoying free education, board and lodging; 45 held other scholarships; 2,868 received free education from the Government and 219 free education from other sources. Thus 3,552, or 21.59 per cent. receive a free education.

All pupils in Malay vernacular schools enjoy free education.

Queen's Scholarships. Government has decided not to restore the Queen's Scholarships, being of opinion that, as the sum available for expenditure on education is limited, it is proper to devote that sum to the advancement of local education and the benefit of a comparatively large number of students to be trained for the public service rather than to divert any portion of it to the endowment of scholarships to the United Kingdom for only one or two students a year who may not even settle in the Federated Malay States. The endowment of collegiate scholarships for the few is generally and in the opinion of Government rightly regarded as a proper channel for private benefaction.

The Federal Government is pledged to support Raffles College and King Edward VII College of Medicine, Singapore, as the local seats of advanced education and is of opinion that any sum available for such education may more usefully be allocated to the endowment at these Colleges of more scholarships and professorships, without which they cannot hope to become constituent colleges of a University.

English schools. There were 23 English Government schools for boys. 13 English grant-in-aid schools for boys and 13 for girls. The total average enrolment was 6,245, 6,485 and 3,718, respectively.

Malay College, Kuala Kangsar. The expenditure on the Malay College, Kuala Kangsar, was $88,765. At the end of the year there were 132 students, all boarders, educated and maintained entirely at Government expense.

The standard has so much improved that the average age for students taking the Cambridge Certificate Examination will soon be 17 years.

One boy from Perak died during the year. There were two cases of chicken-pox. The general health of the boys was satisfactory.

Cricket, hockey and association football are played regularly.

There were 53 Cadets and 76 Scouts. The camp for school Cadet Corps at Port Dickson was attended. At an inspection in May the Commissioner for Malaya gave the Scouts a good report.

Sultan Idris Training College.

At the beginning of the year there were 351 students and three probationers in residence at the Sultan Idris Training College for the training of Malay vernacular teachers. After the fasting month 101 students completed their course and left and 122 new students joined.

The total expenditure was $155,756, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. The cost of educating a student was $364 a year.

The curriculum comprises the Malay language and literature, Malay history, geography, the theory and practice of teaching, hygiene, practical training, rural science, handiwork and religious instruction.

The strength of the four College platoons in the Malayan Volunteer Infantry was 190.

Malay vernacular education.

The Malay vernacular schools are all Government institutions and provide free education. There are 413 schools for boys and 73 for girls with average enrolments of 28,892 and 3,863. The Malay teaching staff numbers 1,388.

At last Malay parents display a most satisfactory eagerness for the education of their girls, a change due largely to the improved practical methods of teaching introduced by the Lady Supervisor of Malay Girls' Schools.

Tamil vernacular schools.

There are 316 Tamil vernacular schools with an average enrolment of 11,831. Estates continued to build and equip new schools. It was still difficult to recruit trained and efficient teachers.

During the year regulations were drafted for the organisation and administration of all Tamil schools.

Chinese vernacular schools.

Three hundred and sixty-one Chinese schools were registered with 839 teachers and 21,370 pupils.

Grants were paid to 73 schools.

Sanitary inspection is now a routine preliminary to the registration of all new schools.

The training class for Chinese teachers was continued at Kuala Lumpur. There were 15 students in three classes.

There is only one Government Chinese school, namely that at Kuala Lumpur.

A series of locally written text-books are to be photolithographed.

Technical education.

The Trade School at Kuala Lumpur trains youths to become general fitters and motor mechanics. There were 52 students. The practical aptitude of the Malay students is most gratifying.

A Trade School at Bagan Serai trains students in carpentry and furniture-making. The average enrolment was 47 and the cost per head $149.

A site has been obtained in Ipoh and full plans for a Trade School with hostels and quarters have been drawn up. It is proposed to make provision at this school for training in Electrical Engineering. With the rapid growth of electrical supply in these States it is necessary to train a number of electrical subordinates such as chargemen, etc., to meet the increased demand.

X.—LANDS AND SURVEY (INCLUDING GEOLOGY).

Area under title.

The area in private occupation at the end of the year amounted to about 2,541,000 acres under agricultural titles and 203,000 acres under mining titles.

It is estimated that of the 27,500 sq. miles covered by the four States of the Federation, 15.6 per cent. is land in private occupation, 21.4 per cent. is reserved forest, while the balance of 63 per cent. is still State land, including therein land reserved for purposes other than forests.

Land revenue.

The land revenue (including $2,317,044 derived from Land Sales) amounted to $7,573,295 as compared with $7,559,954 (including $2,690,210 derived from Land Sales) collected in 1927.

SURVEYS.

Cost of the Survey Department.

The cost of the Survey Department, Federated Malay States, may be summarised as follows:

Year.	Gross expenditure.	Reimbursement and revenue.	Nett expenditure.
1928	$1,869,564	$687,242	$1,182,322
1927	1,708,259	653,881	1,054,378
1926	1,581,943	494,124	1,087,819

The increase in the nett cost is mainly due to increases in the expenditure of the Topographical and Meteorological Branches which may be regarded as capital expenditure.

Revenue Survey Branch.

The following are the main financial data of the Revenue Survey Branch for the past four years:

Year.	Expenditure.	Fees earned at schedule rates.	Actual revenue.	Nett cost.
1925	$814,224	$330,000	$200,947	$613,277
1926	820,561	405,000	292,906	528,655
1927	870,389	526,754	368,580	501,809
1928	903,842	462,877	392,896	510,946

The average nett cost of the last two years, viz., about $505,000 is almost exactly half that for 1921 and 1922 when it was $1,000,000.

State of surveys with reference to requisitions.

The number of lots for which requisitions for survey were received during the year was 15,101, somewhat higher than in 1927. There are no serious accumulations of arrears except in the surveys of native holdings. It is confidently expected that the reduction in the shortage of senior officers combined with the benefit which will be derived from the training of apprentices will result in a large reduction of arrears from 1931 onwards.

Port Dickson Camp.

The refresher course held at Port Dickson during February was attended by all subordinate field officers. The greatest keenness was displayed, and reports from all States show that the benefits derived more than compensated for the expense involved. In this country where there are no definite seasons the Subordinate Surveyor is employed on field work throughout the year and the Camp besides affording unique opportunities for instruction provides a welcome break in what might become a somewhat monotonous round of duties.

Meteorological branch.

The work of establishing and equipping a chain of meteorological stations throughout the Malay Peninsula, and training the necessary staff, was continued. The scheme, which was accepted by the Governments of the Federated Malay States, Straits Settlements, and Unfederated Malay States, provides for the establishment of 17 "second order stations", including two high level stations at Fraser's Hill and Cameron's Highlands, arranged in three main groups, distributed along each coast and the centre of the Peninsula.

During the year nine of the seventeen stations were established and commenced regular observations. The stations established are Kuala Lumpur (Railway Hill), Bukit Jeram (Kuala Selangor District), Temerloh, Kuala Pahang, Kluang and Mersing (Johore), Singapore (Mt. Faber), Fraser's Hill and Cameron's Highlands.

Sites have been obtained for the stations at Malacca, Kuala Lipis, Kuala Trengganu, Kota Baharu, and Alor Star. Difficulty is being experienced in selecting suitable positions at Pangkor, Penang, and Kuala Pergau. It is anticipated that these remaining eight stations will be established during the present year.

The question of rapid communication with these stations is of vital importance so that aircraft may be furnished at any time with reliable information of the conditions they are likely to experience *en route*, and a commencement has been made, with the assistance of the Department of Posts and Telegraphs, in transmitting regular weather reports.

Topographical.

The Topographical Branch was mainly engaged on surveys on the standard scale of 1″=1 mile in Pahang and Kedah. One thousand seven hundred and six square miles were surveyed on this scale, of which 255 square miles were in Kedah and the rest in Pahang. One hundred and fifty-five square miles of forest reserve were surveyed on the scale 4″=1 mile and on Cameron's Highlands an additional area of 5.7 square miles was surveyed on the scale 10″=1 mile. The large scale surveys of Kuala Lumpur and Ipoh were continued. The larger area surveyed on the two more usual scales of 1″=1 mile and 4″=1 mile is due to the increased topographical field staff and to increased efficiency of the plane-tablers, and also to a very large extent to the fact that there were sufficient senior officers for more intensive supervision.

Maps.

The work of the Map Production and Instrument Repairing Branches has become more or less standardised in so far that most of the work in any year is of a similar nature to that of previous years. There are always special maps being produced and, in the case of the Instrument Repairing Branch, new types of instruments being constructed experimentally but these form a small proportion of the general work. The efficiency of both these branches remains at a high standard.

General.

Mr. J. N. Sheffield retired in the course of the year after 34 years' service. He was the head of the Topographical Branch and was almost entirely responsible for bringing this branch to the state of efficiency it has now reached. His services to the Government were recognised some years ago by granting him the personal rank of Assistant Surveyor-General.

The general standard of efficiency of the department has been considerably improved in the last few years, and it has now reached a stage where the rate of improvement must necessarily be slower. In addition to recruiting senior officers as fully qualified Surveyors the practice of recruiting Cadets from English Universities was again brought into operation. The first recruits obtained in this way were due to arrive in January, 1929, while the three others are under training. If these recruits prove capable the practice will be continued.

GEOLOGY.

The geological survey of Malaya progressed but field-work was hampered by illness to an unusual extent. The survey of Johore was completed and a paper on the geology of that State published. The survey of Kelantan was carried as far as is considered advisable in view of the expense involved by further work and the improbability of obtaining valuable results. The survey of Trengganu is not yet completed.

The appointment of a Mining Geologist proved very valuable in facilitating the recording of information from mines and areas prospected. That the mining community appreciate the appointment is shown by the number of reports called for from the Mining Geologist. During his work he discovered torbernite and stannite, neither mineral having been recorded before in Malaya.

Research work was carried out on magnetic cassiterite, the tourmaline-corundum rocks of Kinta, clay for bricks, and a newly discovered rock named vitrite on the Perak River near Kuala Plus.

As a result of the visit to Malaya of the representative of a European firm considerable interest was evinced in geophysical methods of prospecting.

The number of tin-assays carried out for the public decreased considerably owing to the fall in the price of tin and the fact that a leading mining firm set up a laboratory of its own. The revenue was higher than in 1927, however, owing to the increased sale of publications and fees for reports.

XI.—LABOUR.

General.

The majority of labourers in the Federated Malay States are Chinese and Southern Indians. The latter are chiefly engaged in agricultural work and on public services: the former in agriculture and every other form of manual labour. Skilled work is almost entirely in the hands of the Chinese.

In addition there are 5,149 Javanese labourers, immigrants from the Netherlands East Indies. This class of labour is recruited mainly for the Kuala Lipis and Kuantan districts of Pahang. Four hundred and fifty-six of these labourers are employed on contracts of service for 900 days' work entered into in Java. This is the only form of indentured labour in the Federated Malay States. All other labourers of all races are at liberty to leave their employment at any time on giving a month's notice.

Conditions of labour are governed by the provisions of the Labour Code, 1923, and by the Netherlands Indian Labourers' Protection Enactment, 1927. These Enactments are administered by a Labour Department under the direction of the Controller of Labour, Malaya. Officers of the Chinese Protectorate are appointed Deputy or Assistant Controllers of Labour to deal with questions of Chinese labour.

Relations between employers and labourers were generally satisfactory.

The standard rates of wages for Indian labourers prescribed in 1927 of 58 cents a day for men and 46 cents for women were paid in the inland districts of Pahang. Throughout the Federated Malay States minimum rates of 50 cents a day for men and 40 cents for women were paid to all labourers employed by Government departments.

In October, standard rates of wages of 50 cents a day for men and 40 cents for women were prescribed under the provisions of section 141 of the Labour Code for Indian labourers throughout the Coast districts of Selangor. These rates were not to come into force until the 1st February, 1929. In other parts of the Federated Malay States Indian labourers earn from 45 cents to 65 cents (men) and from 35 cents to 55 cents (women). Javanese and Malays earn from 45 cents to 60 cents a day and Chinese who are usually employed on contract (i.e., piece work) from 70 cents to $2 a day according to the nature of their employment.

The estate population for the past five years is shown in the following table:

—	1924.	1925.	1926.	1927.	1928.		Total.
					Males.	Females.	
Indians (of Madras Presidency) ...	119,242	137,761	176,114	172,466	106,890	55,570	162,460
Chinese ...	30,884	37,879	61,064	44,239	46,052	4,595	50,647
Javanese ...	4,516	4,165	4,760	4,550	3,951	1,198	5,149
Others ...	4,715	4,549	4,822	3,963	4,046	742	4,788
Total ...	159,357	184,354	246,760	225,218	160,939	62,105	223,044

Health.

Health conditions on estates generally show an improvement on those of 1927. The death-rate among Indian labourers on estates and mines from which returns are received was 15.71 per mille on an average population of 170,824 as compared with 18.44 on an average population of 175,235 in 1927, 15.62 per mille in 1926, 12.55 in 1925 and 11.94 in 1924.

The mortality among labourers of other races, of whom there are fewer employed on estates was 7.27 per mille. The death-rate per mille amongst labourers of all races on estates was 14.19 and amongst Indian labourers 15.98.

Under the Health Boards Enactment a Central Health Board has been constituted which is empowered to collect an annual cess or cesses for the purpose of carrying out health measures in other than Sanitary Board areas and Local Boards under the control of the Central Health Board have been formed in all States. The Local Board areas correspond generally with those of administrative districts and the District Officers are Chairmen of the Local Boards. In order to co-ordinate the work of the Boards with the Labour Code the Controller of Labour is appointed ex-officio President of the Central Health Board. It is hoped that the supply of additional hospitals, the extension of medical supervision to all estates and the preparation of schemes for the improvement of unhealthy areas will by these means be facilitated. Up to the middle of 1928 progress had been slow owing in part to the experimental nature of the whole measure and in part to the difficulty experienced in reconciling various conflicting interests, but there has been a growing interest on the part of the public and towards the end of the year there were signs of something approaching unanimity.

The original Health Boards Enactment of 1926 was repealed in April by a new Enactment No. 7 of 1928.

Immigration.

Chinese immigration is uncontrolled and takes place mainly through the ports of the Colony. The number of Chinese deck passengers arriving in the Colony was 295,700, while the number of those returning to China was 149,354. Large numbers of these immigrants proceeded to the Federated Malay States but in spite of this continued influx there was little unemployment.

Southern Indians.

The immigration of labourers from Southern India is regulated by the Indian Immigration Committee (of which the Controller of Labour, Malaya, is ex-officio Chairman) appointed by the High Commissioner.

The railway fares in India, steamer passages and transport expenses of such labourers to their places of employment are paid from the Indian Immigration Fund.

The number of labourers so assisted who arrived in Penang during 1928 was 27,240 compared with 123,826 in 1927. These "assisted labourers" consisted of 22,649 adults and 4,491 minors. Of the adults, 14,635 were men and 8,014 women: the number that proceeded to places of employment in the Federated Malay States was 18,343 compared with 77,863 in 1927. The great drop in the number of immigrants is to be attributed partly to the large influx of Indian labourers in 1926 and 1927 which had satisfied the existing demand for labour and partly to the practical cessation of further recruitment owing to the uncertainty in the rubber market created by the decision that all restrictions on the export of rubber from Malaya would be withdrawn on the 1st November, 1928.

The Indian Immigration Fund.

The income of the Indian Immigration Fund is derived from a quarterly assessment levied on all employers of South Indian labour throughout Malaya based on the number of days' work done by such labourers during the quarter.

With a view to increasing the number of female immigrants a differential rate is levied on male and female labourers. The rate of assessment was fixed at $3 for males and $2 for females for the first and second quarters and at 50 cents for males and nil for females for the third and fourth quarters of 1928 in respect of every 72 days' work done.

During 1928, 13,819 adult and 4,328 minor decrepit or destitute Indians were assisted with passages back to India. Of these, 7,279 adults and 2,345 minors were from the Federated Malay States. Repatriation.

Amongst those repatriated at the expense of the Indian Immigration Fund, 2,157 adults and 1,062 minors had been inmates of the Home for Decrepit Indians, Kuala Lumpur, maintained by the Immigration Committee.

XII.—MISCELLANEOUS.

LEGISLATION.

Excluding the Supply Enactments in all 30 Enactments were passed during 1928, of which 19 were amending Enactments and eight were re-enactments and consolidations of existing law.

The new matter consisted of a measure to provide for the control of river launches, a Divorce Enactment modelled on the Colonial Ordinance but incorporating the recent alteration in the English law, and an Enactment to regulate Government suits. This last is an important measure and some of its provisions are taken from the Bill which was prepared by the Committee appointed by Lord Birkenhead to consider the whole question of Crown suits in England. Its object is to confirm and facilitate the right of action against Government in respect of tortious acts committed by Government servants while affording the necessary protection to the Government in its discharge of public duties.

The re-enacting and consolidating measures included a much overdue Motor Vehicles Enactment, a new Mining Enactment which has necessarily had to await the passing of the Land Code, and a new Pensions Enactment following the model which is being adopted in other administrations. The Sungei Buloh scheme for accommodating decrepits has called for a new Vagrants and Decrepit Persons Enactment, and the adhesion of Government to the Opium Convention has required a new Deleterious Drugs Enactment and amendments to the Opium and Chandu Enactment.

Of the amending measures, the Labour Code (Amendment) Enactments introduced the principle of allotments to labourers for their use in growing food-stuffs or as grazing ground and provided for health measures to be taken in places of employment other than estates or mines, the Minor Offences

Enactment was amended to provide power to arrest without warrant, and the Electricity Enactment was amended to simplify the procedure for carrying lines over alienated land. The working of the Criminal Procedure Code, the Land Code and the Land Acquisition Enactment had disclosed various omissions and defects in these laws and amending Enactments were passed with a view to correcting these. None of the other Enactments passed call for special mention.

PLANTERS' LOANS BOARD.

Planters' Loans.

On 1st January, 1928, the Board had outstanding as "Planters" loans to four companies ($165,000) and fifteen individuals ($204,400), the sum of $369,400. It lent in new loans (ten) during the year a further $126,000, while two properties repaid their loans in full amounting to $33,400 and two other properties made partial repayments amounting to $4,800.

At the end of the year, the "Planters" loans outstanding were $457,200, to four companies ($210,000) and nineteen individuals ($247,200).

Building Loans.

Building Loans at the beginning of the year totalled nineteen amounting to $381,375. During the course of the year, the Board dealt with seventy-three further applications for loans. Of these, sixteen were either subsequently withdrawn or not proceeded with by the applicants, seventeen for various reasons could not be entertained by the Board, while four were held over for consideration at a later date.

Of the thirty-six applications that were approved, amounting to $864,800, one ($10,000) was subsequently cancelled, while nine ($189,000) had not been taken advantage of by the end of the year.

The amount actually lent in new loans was $665,800.

Repayments in full were made by six borrowers totalling $122,375 and eleven others made partial repayments to the extent of $27,800.

At the end of the year the Board had outstanding thirty-nine loans amounting to $895,920.

War Service Loans.

Under the War Service Land Grant Scheme, at the beginning of the year, ninety-three ex-soldiers were benefiting by approved loans amounting to $2,263,000.

Nine beneficiaries repaid their loans in full amounting to $225,000 while partial repayments came to $11,000.

The amount outstanding at the end of the year was $2,027,000 due by eighty-four beneficiaries.

Interest.

Interest earned during the year amounted to $137,103, of which $26,490 was in respect of "Planters" loans, $19,611 in respect of "Building" loans and $91,002 in respect of "War Service" loans.

Interest collected totalled $117,378. Of this sum, $57,733 was credited to Federal Revenue and $59,645 to the revenue of the Board.

Profit and loss.

The Board's profit on the year's working amounted to $24,764.

Reserves.

The reserves of the Board stand at $615,000.

Capital.

The capital of the Board is $4,000,000 created by "The Planters Loans Fund Enactment, 1915".

Public Trustee.

The year under review was the sixth year of the working of the Department of the Public Trustee.

The duties of the Public Trustee are:

(*a*) to act in the administration of estates of small value;
(*b*) to act as an ordinary trustee;
(*c*) to act as a trustee appointed by the Court.

During the year the Public Trustee accepted 44 trusts in all as compared with 30 in 1927 and 18 in 1926.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at about four million dollars.

Estate Duty Office.

The year under review was the second year in which this office collected the stamp duty due in respect of all four States on the estates of deceased persons.

The number of affidavits for the Collector which were received during the year was 720.

The revenue collected amounted to $529,937 as compared with $370,583 in 1928.

VOLUNTEERING.

Recruiting.

During 1928 the strength of the Malay States Volunteer Regiment increased by 130 men, while the average age decreased—a satisfactory feature.

Efficiency.

The number of "efficients" was 99.66 per cent. of the Colour Service strength, an improvement on last year of 9 per cent. An average of 11 more drills were carried out per man than are required by statutory obligation.

Instruction.

The school of instruction, Port Dickson, increased in popularity and had a record attendance.

A Battalion Signal Section was formed and did well. In spite of a comparative shortage of ammunition due to the increase of strength a distinct improvement was made in shooting, particularly with regard to the Vickers Machine Gun.

Excluding special expenditure the cost of the Malay States Volunteer Regiment worked out at $268 per head as compared with $239 in 1927. This may be considered satisfactory in view of the increase in drill attendances.

The regiment had a very successful year and is to be congratulated.

Malayan Volunteer Infantry.

The numbers of the Malayan Volunteer Infantry were reduced. In all units improvement was shown, but it was naturally greatest in units where men classified as "inefficient" were weeded out.

There is room and need for improvement all round but the weakness in general lies in the training of platoon and section leaders on whose knowledge and skill real efficiency must mainly depend. Improvement in this respect and greater care in selection of recruits should very quickly bring the Malayan Volunteer Infantry up to a higher standard.

GENERAL.

His Excellency Sir Hugh Clifford, M.C.S., G.C.M.G., G.B.E., High Commissioner for the Malay States, went on leave on 28th July, 1928, and Sir Hayes Marriott, M.C.S., K.B.E., C.M.G., Officer Administering the Government of the Straits Settlements, held the office of High Commissioner until the 28th December.

Sir William Peel, M.C.S., K.B.E., C.M.G., Chief Secretary to Government, returned from leave on 22nd March, 1928, and Mr. H. W. Thomson, M.C.S., C.M.G., British Resident of Perak, who had acted as Chief Secretary to Government during Sir William Peel's absence, resumed the duties of his own appointment.

A visit was paid to the States in January, 1928, by H.M.S. "Hawkins".

His Majesty the King was graciously pleased to confer the following honours :

On New Year's Day—	
Companion of the Most Distinguished Order of Saint Michael and Saint George	Mr. E. C. H. Wolff, M.C.S., British Resident of Negri Sembilan.
Honorary Companion of the Most Distinguished Order of Saint Michael and Saint George ...	Tungku Suleiman ibni Almerhum al Sultan Ahmad al Maazam Shah, Tungku Besar of Pahang.
On His Majesty's Birthday—	
Knight Commander of the Most Excellent Order of the British Empire (Civil Division) ...	Mr. W. Peel, M.C.S., C.M.G., Chief Secretary to Government.
Officer of the Most Excellent Order of the British Empire (Military Division) ...	Lieut.-Colonel J. P. Swettenham, V.D., Director of Public Works and Officer Commanding, Selangor Volunteer Corps.

The Certificate of Honour approved by His Majesty the King as a recognition of loyal and valuable services rendered to the Government of the Federated Malay States was awarded to the following on the occasion of His Majesty's Birthday :

Mr. W. J. B. Ashby;

Wan Mohamed Amin bin Wan Mohamed Syed, Dato' Amar Penghulu Isti Adat;

Datoh Lee Kong Lam, J.P.;

Abdullah bin Panglima Muda, Datoh Penghulu Jelebu, Mendika Mentri Akhirzaman;

Wan Mohamed Salleh bin Ungku Temenggong, Ungku Panglima Besar;

Tengku Kudin bin Tengku Samat, Penghulu Gali, Raub.

WILLIAM PEEL,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
21st May, 1929.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,970	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,355	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	56,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.
* As now corrected. ‖ Excluding bullion and specie.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,906	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928

‖ Excluding bullion and specie. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. † The figures for previous years included items now omitted owing to reclassification of revenue.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1928.

Dr. *Cr.*

	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscriptions—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamps, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamps, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	...	20,367,692 10			
Posts and Telegraphs Department	...	3,262,637 48			
Topographical Survey Department	...	763,362 66			
Topographical Survey of Forest Reserves ...	...	67,063 83			
Railway—Open Lines	...	9,245,431 54			
,, Construction	...	38,141,389 54	71,847,577 15		
To Balance ...	...	...	2,449,972 45		
			$80,185,714 29		$80,185,714 29

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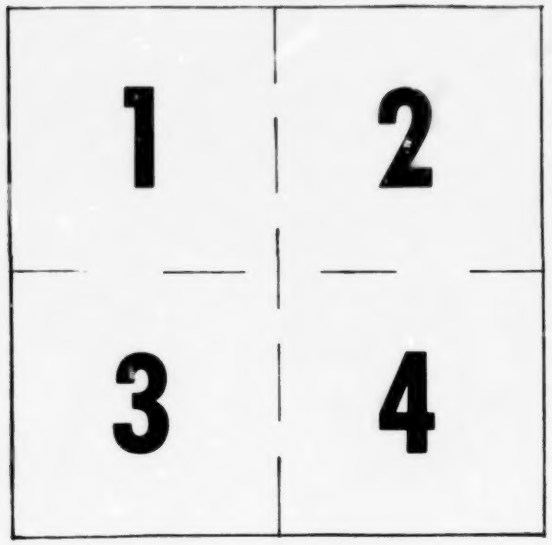
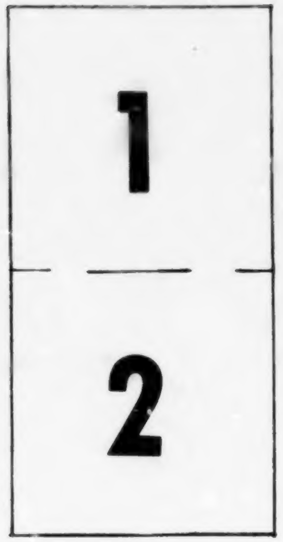
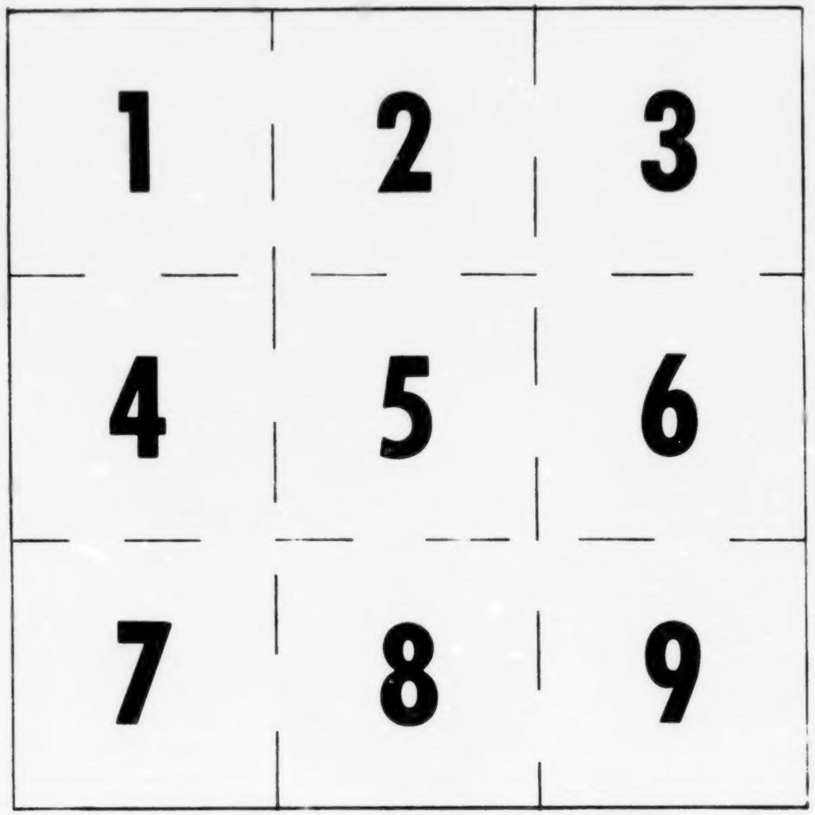
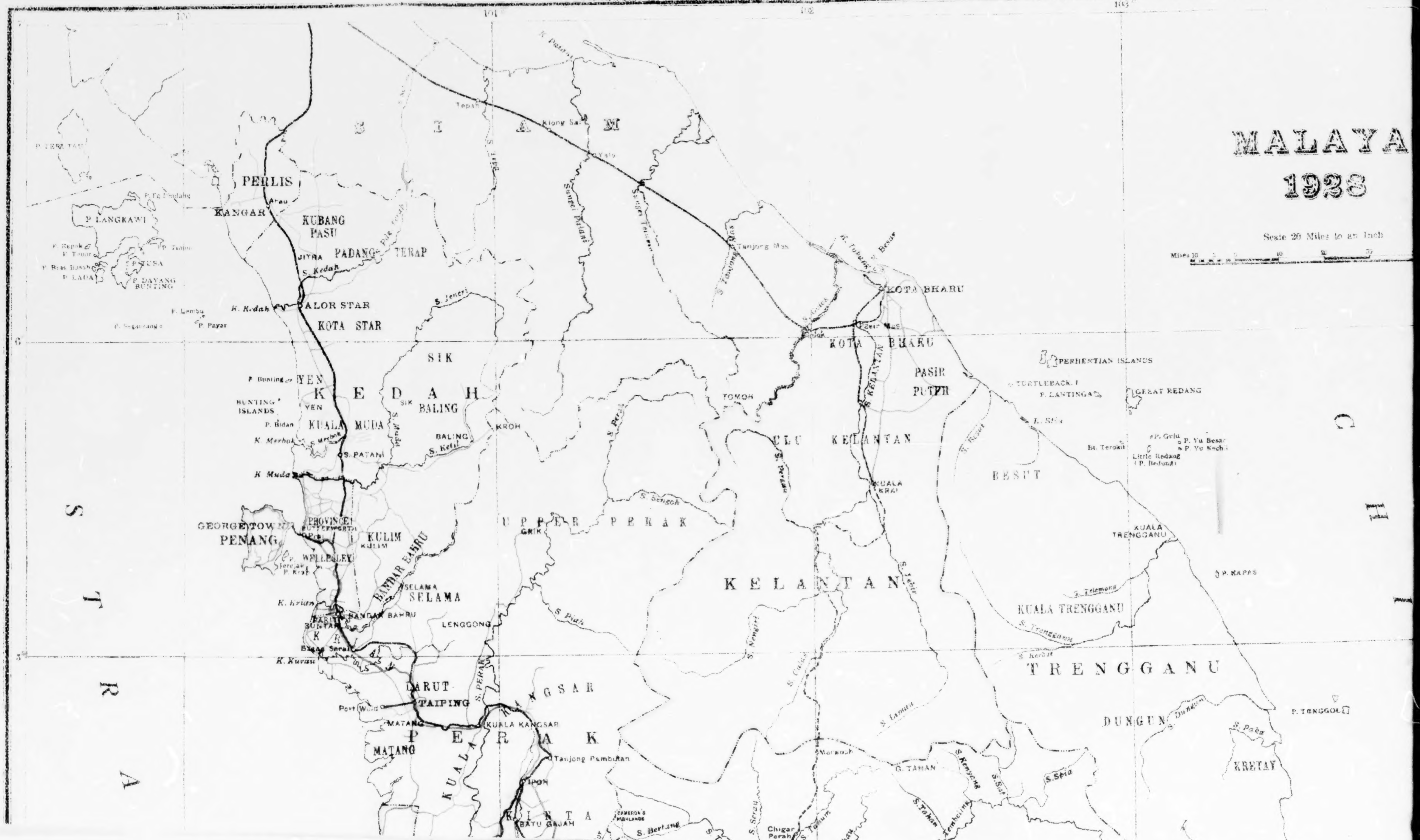
KUALA LUMPUR.

Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.





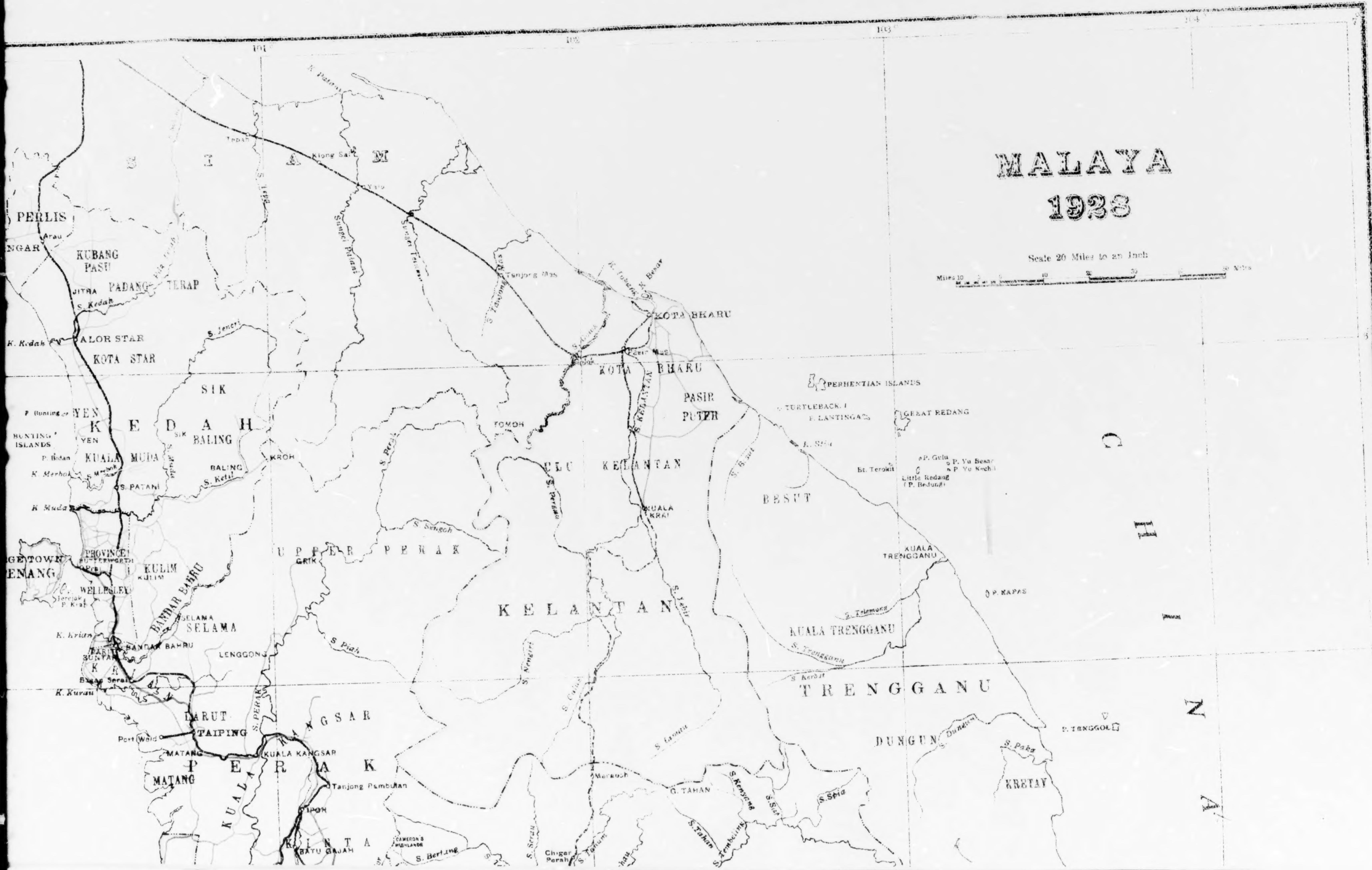




MALAYA 1928

Scale 20 Miles to an Inch

Miles 10 5 0 10 20 30
100°
101°
102°
103°
6°
5°
S I A M
Tepah
Klong Sai
Yala
Tanjong Mas
K. Patani
Sungei Patani
Sungei Telubin
S. Tanjong Mas
K. Tabong
Besar
P. TERUTAU
PERLIS
Arau
KANGAR
KUBANG PASU
JITRA
PADANG TERAP
S. Kedah
P. LANGKAWI
P. Rapak
P. Timun
P. Bras Basah
P. LADA
P. TUBA
P. DAYANG BUNTING
P. Tg Dendang
P. Timun
ALOR STAR
KOTA STAR
K. Kedah
P. Lembu
P. Payar
P. Segantang
S. Jeneri
SIK
P. Bunting
YEN
K E D A H
BUNTING ISLANDS
YEN
P. Bidan
KUALA MUDA
K. Merbok
SIK
BALING
BALING
S. Ketil
S. Patani
KROH
K. Muda
GEORGETOWN
PENANG
PROVINCE
BUTTERWORTH
Prai
WELLESLEY
P. Terejak
P. Kra
KULIM
KULIM
BANDAR BAHRU
SELAMA
SELAMA
K. Krian
PARIT BUNTAR
BANDAR BAHRU
K R I A N
Bagan Serai
K. Kurau
LENGGONG
DARUT
TAIPING
Port Weld
MATANG
MATANG
P E R A K
KUALA KANGSAR
KUALA KANGSAR
S. PERAK
Tanjong Rambutan
IPOH
K I N T A
BATU GAJAH
CAMERON'S HIGHLANDS
S. Bertang
UPPER PERAK
GRIK
S. Piah
S. Perak
S. Sengoh
KOTA BHARU
Golok
S. Golok
Pasir Mas
KOTA BHARU
PASIR PUTEH
S. KELANTAN
TOMOH
ULU KELANTAN
S. Pergau
KUALA KRAI
K E L A N T A N
S. Lebir
S. Nenggiri
S. Galas
S. Lanuau
Merapoh
G. TAHAN
S. Kenyam
S. Sia
S. Tahan
S. Tembeling
S. Serau
Chigar Perah
S. Tanum
PERHENTIAN ISLANDS
TURTLEBACK I.
P. LANTINGAN
GREAT REDANG
K. Setiu
Bt. Terokit
P. Gulu
P. Yu Besar
P. Yu Kechil
Little Redang (P. Bedong)
BESUT
S. Besut
KUALA TRENGGANU
P. KAPAS
S. Telemong
KUALA TRENGGANU
S. Trengganu
S. Kerbat
T R E N G G A N U
DUNGUN
S. Dungun
P. TENGGOL
S. Paka
KEMAMAN
S. Sipia
S T R A
C H I


MALAYA
1928
Scale 20 Miles to an Inch
Miles 10 10 20 30 40 50 Miles
101°
102°
103°
104°
S I A M
PERLIS
Arau
NGAR
KUBANG PASU
JITRA
PADANG TERAP
S. Kedah
K. Kedah
ALOR STAR
KOTA STAR
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K. Muda
KROH
S. Jeneri
Tepah
Klong Sai
Yi-ngo
Sungai Patani
Sungai Tanjong Mas
Tanjong Mas
K. Tabalu
K. Besar
KOTA BHARU
Pasir Mas
KOTA BHARU
PASIR PUTEH
S. KELANTAN
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S. Sengoh
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S. Kerbat
TRENGGANU
DUNGUN
S. Dungun
S. Paka
KRETAY
P. TENGGOL
C H I N A
GEORGETOWN
PENANG
PROVINCE WELLESLEY
Prai
KULIM
Jerejak
P. Krah
BANDAR BAHRU
SELAMA
K. Krian
PARIT BUNTAR
BANDAR BAHRU
LENGGONG
Bagan Serai
K. Kurau
LARUT
TAIPING
Port Weld
MATANG
MATANG
KUALA KANGSAR
KUALA KANGSAR
P E R A K
Tanjong Rambutan
IPOH
KINTA
BATU GAJAH
KUALA
CAMERON'S HIGHLANDS
S. Bertang
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G. TAHAN
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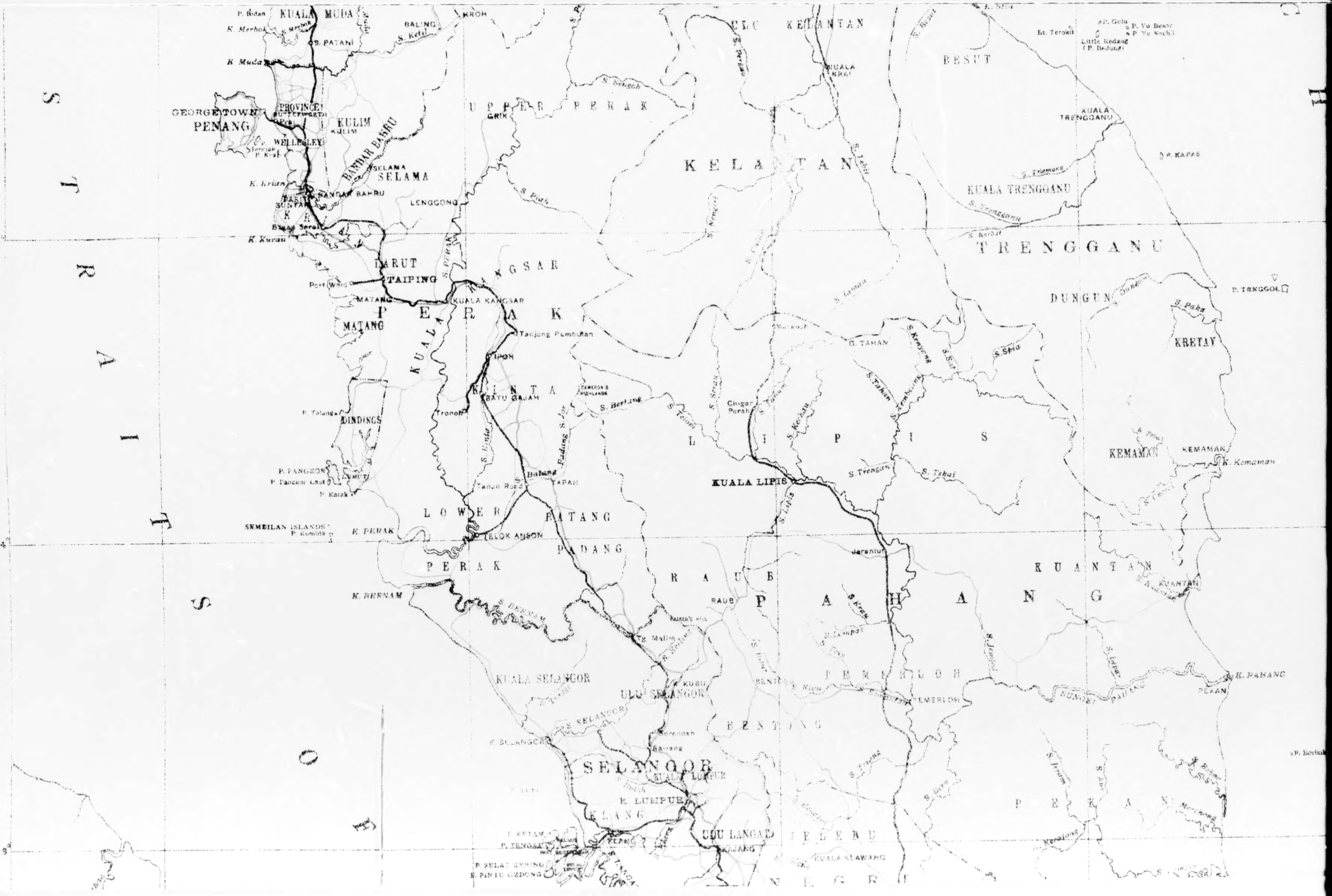
S. Kenyam
S. Tembeling
S. Sat
S. Seia
S. Lewau
Chigar Perah
S. Serau



STRAITS OF
KUALA MUDA
K. Merbok
S. Patani
K. Muda
BALING
S. Ketil
KROH
ULU KELANTAN
KUALA KRAI
BESUT
Bt. Terokit
P. Gulu
P. Yu Besar
P. Yu Kechil
Little Redang (P. Bedung)
GEORGE TOWN
PENANG
PROVINCE WELLESLEY
BUTTERWORTH
Prai
KULIM
BANDAR BAHRU
Jerejak
P. Kra
UPPER PERAK
GRIK
S. Sengoh
KELANTAN
KUALA TRENGGANU
P. KAPAS
S. Telemong
S. Trengganu
SELAMA
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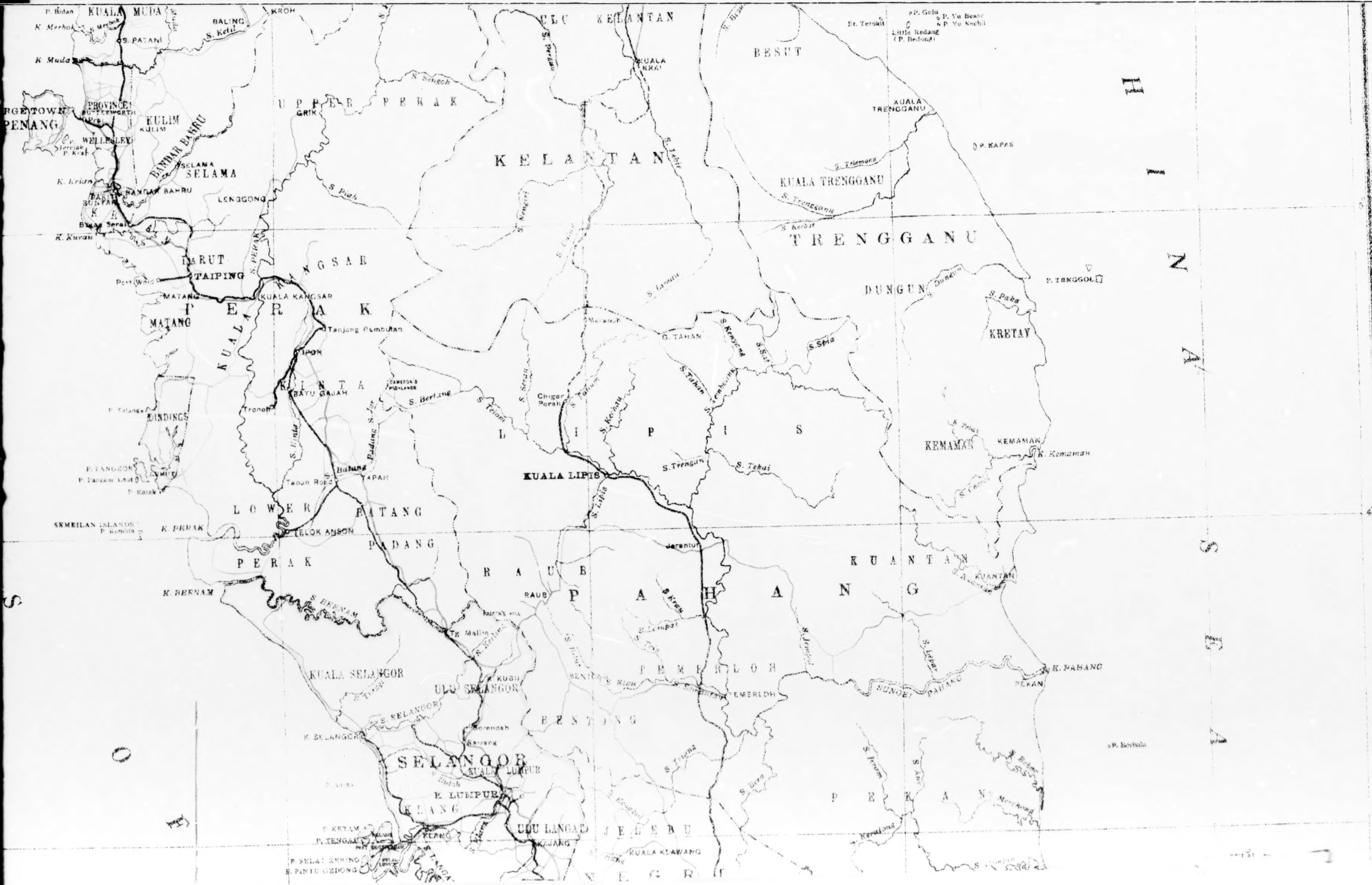
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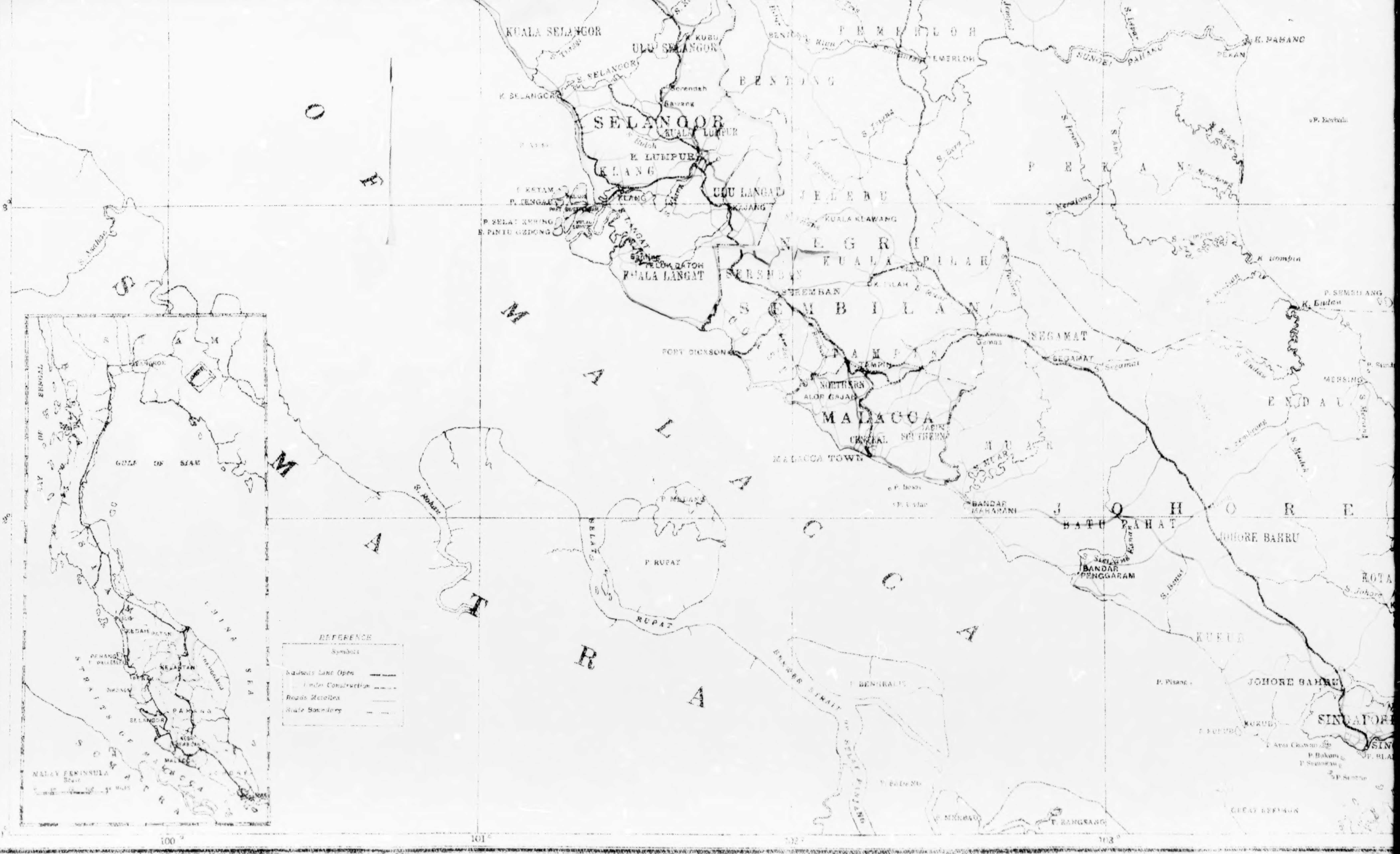
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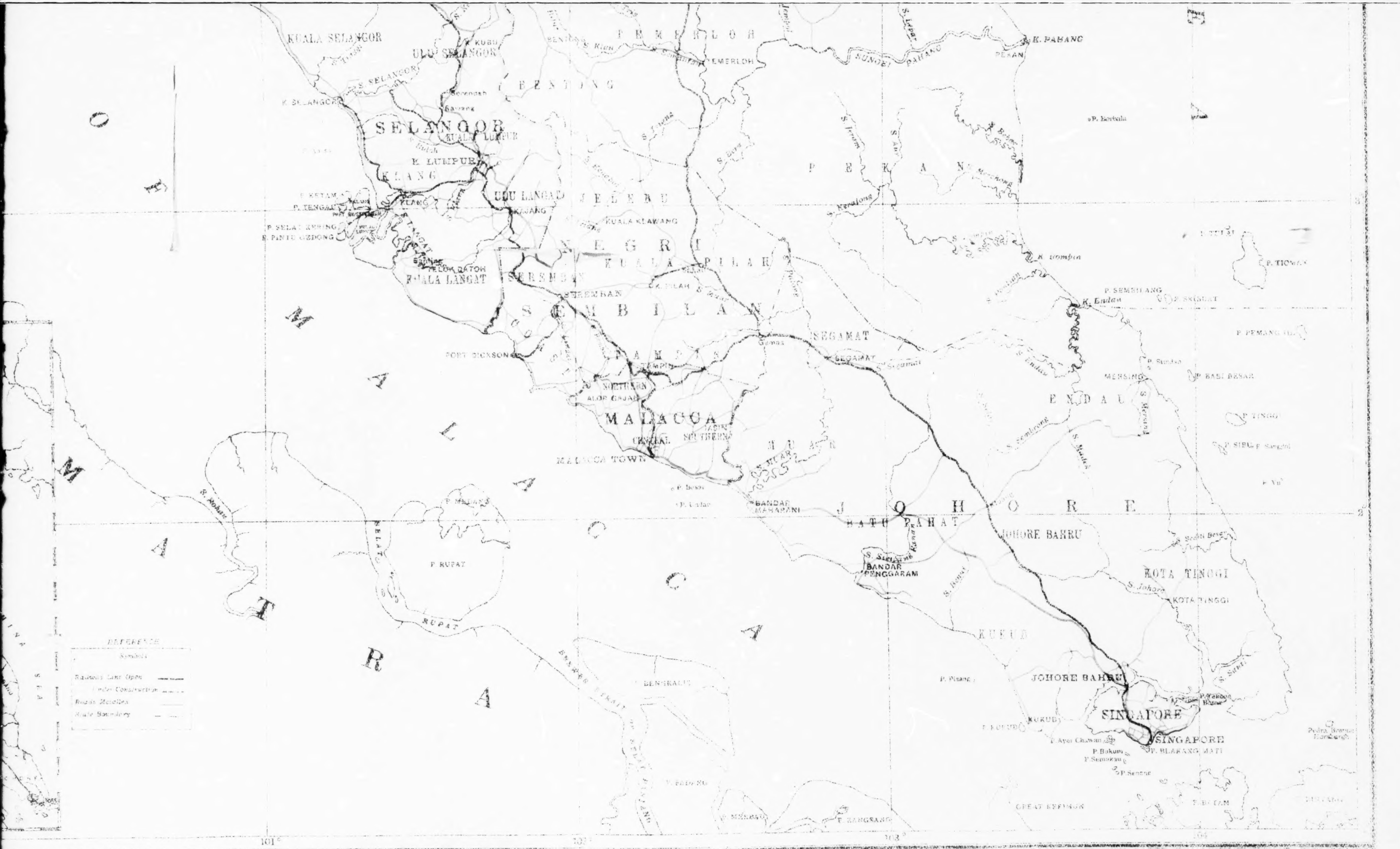
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ANNUAL REPORT

FOR

1929

BY

C. W. H. COCHRANE, C.M.G.,
Chief Secretary to Government, Federated Malay States.

KUALA LUMPUR:
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Supplement to the "F.M.S. Government Gazette," July 4, 1930.

FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1929.

PREFACE.

HISTORY.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose

advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal

sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which

directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

Constitution of the States.

The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese—in Perak an Indian now sits on the Council. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

The Federation.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the

Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President. the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, the Commissioner. Trade and Customs, one Official Member nominated by the High Commissioner, and twelve Unofficial Members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

GEOGRAPHY.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

Selangor (3,150 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

CLIMATE.

The temperature on the western side of the main range of mountains which forms the backbone of the Malay Peninsula has little appreciable variation throughout the year. At Kuala Lumpur—a fairly typical station—the mean maximum temperature is 90°F. and the mean minimum 72°F., giving a range of 18°F.

On the East Coast, however, the North-East Monsoon, lasting from November to March, causes a distinct meteorological contrast with the rest of the year as regards wind and rainfall. As the temperature is high and the variation so small the rain which cools and freshens the atmosphere is a most important factor in the comfort of life in the Malay Peninsula. The rain is generally of a torrential nature and most of it falls between the hours of noon and 8 p.m., 5 p.m. being the wettest hour of the day. Records from stations on the West Coast of the Peninsula, where the South-West Monsoon is broken by the high land of Sumatra, show that April and October are the wettest months. There is a decrease from April to July which is the driest month, rising to a second peak in October and decreasing to moderate rainfall in January. Although there are no very clearly defined wet and dry seasons as occur in some other tropical countries and rain falls the whole year round, it does divide itself into periods, March, April, May and October, November, December are wet months, February, June, July and August dry, while September and January are months of variable and moderate rainfall. Even to this general rule there are considerable variations due to abnormalities in the time of change of the monsoons.

On the West Coast of the Peninsula the coastal stations are the driest, the average rainfall being about 85 inches. This gradually increases inland, and the stations close to the foot of the main range of mountains show an average fall of about 105 inches. On the East side of the Peninsula, which is exposed to the full force of the North-East Monsoon blowing in from the China Sea, the coastal stations are much the wettest, having a mean rainfall of about 130 inches.

It is heaviest during December and January during which months the North-East Monsoon is at its height. Landwards the fall gradually diminishes, until, at the eastern side of the main range the stations show a mean of 95 inches. On this side of the Peninsula, October, November, December, January are the wet months with a steady decrease till July—which again is the driest month—and a gradual increase culminating in December—the wettest month. In the mountains the rainfall is comparatively high, particularly in the Larut Hills above Taiping, where the average at "The Cottage" (4,513 feet) for the years 1904-1929, is 245 inches. Taiping at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The Larut Hills are however exceptional, as the average for other hill stations of approximately the same altitude, but situated in the main range of mountains, is for Fraser's Hill (4,289 feet) and Cameron's Highlands (4,650 feet) 112 inches. The district of Jelebu, situated in the northern part of Negri Sembilan, and sheltered from the influence of both North-East and South-West Monsoons, is the driest in the Peninsula, with an average rainfall in the years 1891-1929 of 65 inches. Negri Sembilan, owing to the absence of high mountains, has the lowest rainfall of the States of the Federation, the average of six typical stations being only 80 inches.

The heat, owing to the high relative humidity (80 per cent.), is at times oppressive, although 100°F. has never been recorded in the shade, and there is almost always a slight breeze to modify the heat. On the coast the nights are sometimes oppressive but inland are comparatively cool, and refreshing sleep is always possible without the aid of fans or punkahs. On the hill stations the temperature has been known to fall to 40°F. at night.

Charts and statistics, however, do not disclose two important features, viz., the brilliant sunshine which is the rule during the morning, and the dry spells—often extending to three or four weeks—when the grass becomes parched.

The Peninsula lies within the region of the South-West and North-East Monsoons, but owing to the barrier provided by Sumatra, the only really strong wind is the North-East Monsoon, which gathers velocity over the open space of the China Sea, but even this rarely attains gale force, and then only for short intervals.

Violent squalls known as "Sumatras" are not infrequent on the West Coast of the Peninsula between April and September. They are generally of short duration, occur mostly during the night or early morning and are often accompanied by severe thunderstorms and torrential rain.

HILL STATIONS.

CAMERON'S HIGHLANDS.

Progress on development throughout the year was, on the whole, satisfactory.

The Development Committee met on six occasions.

A section of the road from the 15th to the 25th mile was opened to traffic during the year in successive stages of five miles, and a further five miles up to the 30th mile was within sight of completion.

Work on the extension of the main road from Ginting B to Parit Falls was put in hand, and the earthwork on the Girdle Road was nearly completed.

Clearing, burning and grubbing of the recreation area progressed during the year, and about 120 acres was cleared and burned and a small area grubbed.

Eight miles of mule paths were constructed and maintained during the period under review.

Extensive surveys and reconnaissances were carried out and about 200 building sites selected and reported upon.

Halting bungalows were erected and furnished at Tanah Rata and Lubok Tamang.

The total sum of money expended was as follows :

Under Development Committee	$ 90,681
Main Road Construction	1,143,000
Public Works Department Other Charges, etc.	19,137
	$1,252,818

FRASER'S HILL.

The Development Committee met on four occasions.

The new Rest-house was completed and brought into use. This acquisition to the accommodation on the hill is much appreciated and will serve a most useful purpose. A new bungalow "Kindersley", a three-stalled garage for the "Lodge", four tennis courts and a playing ground for children were completed.

The golf links, one of the centres of attraction, were efficiently maintained, as well as the numerous paths and other amenities provided for the comfort of visitors.

The dairy and agricultural gardens were taxed to their utmost to provide requirements, and an extension of these essential services is now under consideration.

This station proved very popular throughout the year, and the change of climate and environment was enjoyed by a large number of visitors.

The expenditure during the year was as follows :

Under the Development Committee	$ 46,243
Under Public Works Department	135,423
	$181,666

BUKIT KUTU.

Bukit Kutu Hill, 3,458 feet in height, is a western spur of the main range looking down on the old town of Kuala Kubu. From its isolated position it enjoys a drier climate than Fraser's Hill and the advantage of a very extensive view. The hill is a reserve for the preservation of animals and birds.

A path was constructed from Kuala Kubu and the first bungalow built in 1895 from granite and timber obtained on the spot at a cost of $6,550. In 1904-5 a second bungalow was built at the cost of $9,985.

The encroachment of silt from the Selangor River during the last few years had increased the length of old path to 8¾ miles and in 1929 a shorter path was constructed from Peretak which reduces the walk up the hill to five miles.

GUNONG ANGSI.

This is a small hill station in Negri Sembilan containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

GUNONG TAHAN.

The establishment of a hill station at Gunong Tahan in Pahang was first considered in 1912, and Sir Arthur Young, then High Commissioner for the Malay States, led an expedition to the mountain, with a view to investigating its possibilities. As a result of this visit, a topographical survey was carried out in 1913, and surveys were made for a road and railway connection. The length of the line from the junction of the Pahang-Kelantan line was approximately 30 miles, of which 20 miles were to be constructed as an ordinary railway, and 10 miles as a rack railway. The outbreak of the war prevented further progress with the scheme. Meteorological observations were taken from July, 1921, to July, 1923. The rainfall for the first year was 137.78 inches, and for the second year 161.69 inches. The wettest month was January, 1923, with 29 inches, and the driest was February, 1923, with 2.43 inches. The highest maximum temperature recorded was 76°F. on three occasions, and the lowest minimum temperature 48°F. There appears to be no record of investigations into the area available for residential purposes or for cultivation. When the revised programme of works in connection with the Loan Account was prepared in 1921, the provision for the railway to Gunong Tahan was omitted, and the proposal for the development of Gunong Tahan as a hill station is, for the present at least, abandoned.

KLEDANG.

This hill near Ipoh, Perak, is 2.646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" (the bungalow of the Chief Secretary to Government) and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

PRINCIPAL LANGUAGES.

The principal languages spoken are English, Malay, Tamil and Chinese. The lingua franca is Malay.

CURRENCY.

The unit of currency is the silver dollar which is divided into 100 cents. The value of the dollar is fixed at present at two shillings and four pence. Subsidiary silver coins are those of value 50 cents, 20 cents, 10 cents and 5 cents. There is also a nickel 5-cent coin and copper or mixed metal coins of 1 cent denomination.

WEIGHTS AND MEASURES.

English, Malay and Chinese weights and measures are used. A pikul (equivalent to 133⅓ lbs.) is sub-divided in 100 katties of 16 tahils each. A koyan consists of 40 pikuls and is equivalent to 5,333⅓ lbs. avoirdupois. A gantang is the equivalent of one gallon and a chupak is equal to a quart.

Chinese equivalents to a tahil, a kati, a pikul and a koyan are a leong, a kan, a tam and si sap tam, respectively. Chinese equivalents to a chupak and a gantang are a chup put and a tang, respectively.

ANNUAL REPORT, 1929.

I.—GENERAL.

The Federated Malay States enjoyed on the whole a prosperous year, but the prices of tin and rubber declined with depressing monotony towards the close owing to increased production and bad trade conditions throughout the world, and at the time of writing the situation is distinctly grave. Steps are being taken by the Tin Producers' Association to regulate the output of tin, and the rubber industry has arranged a general cessation of tapping for a month. Whether such efforts will have the desired result in raising the price of these commodities to an economic level is perhaps doubtful, but it is at least an encouraging sign that the producers are prepared to combine and showing a welcome unanimity of purpose.

II.—FINANCE.

Budget for 1929.

The Estimates of Revenue and Expenditure for the year 1929 provided for a revenue of $69,975,951 (excluding Railway revenue) and an expenditure (excluding Railway expenditure on Revenue Account and expenditure on Loan Account) of $95,331,438.

Actual revenue and expenditure.

The actual revenue for the year (including the net revenue Railway) was $81,799,584 and the expenditure was $84,660,975. Thus the deficit was $2,861,391 against an estimated deficit of $25,355,487.

The excesses in revenue as compared with the estimate were :

Customs	$ 4,624,448
Forests	133,761
Lands and Mines	119,680
Licences and Internal Revenue	1,233,040
Fees of Court or Office, etc.	1,600,503
Municipal	430,846
Light, Water and Power	113,660
Posts, Telegraphs and Telephones	134,655
Railways (Net Receipts)	1,812,827
Rent on Government Property	104,285
Interest	185,538
Miscellaneous	207,856
Land Sales	1,166,516
Sale of Property	548,787
Total	$12,417,402

The shortages in revenue as compared with the estimate amounted to $593,769 as under :

Excise	$537,844
Timber and Minor Forest Products	55,925
Total	$593,769

The shortage in Excise revenue was arrived at as follows:

	Shortage.		Excess.
Sale of Chandu	$600,193	...	—
Other items	—	...	$62,349

Net shortage $537,844.

The shortage in Sale of Timber under "Timber and Minor Forest Products" was $55,599.

The total savings in expenditure amounted to $11,647,064, the largest items being:

Pensions	$ 349,073
Customs and Excise	287,099
Municipal	473,807
Posts and Telegraphs	875,558
Railways	2,333,357
Agricultural Department	100,407
Clerical Service	128,879
Education	431,025
Electrical Department	215,482
Electrical Department, S.S.	415,745
Medical	715,386
Military	330,353
Miscellaneous, Unreserved	222,705
Police	182,177
Public Works Department	375,425
Public Works—Annually Recurrent	370,960
Public Works—Special Services	2,859,650
Surveys	281,650
	$10,948,738

Excesses over estimated expenditure totalled $976,601, the largest items being:

Rulers and Native Officers	$218,980
Forest Department	516,422
Miscellaneous, Reserved	44,806
Marine	53,330
Transport	88,050
	$921,588

The excess under Rulers and Native Officers is due to the introduction of revised scales of salaries, while that under Forest Department is caused by the transfer to expenditure account in 1929 of stock of timber on 31st December, 1928, previously debited to a suspense account.

Public debt.

The public debt remained as on 31st December, 1928, at $80,185,714, and consists of the Straits Settlements Sterling Loan of £9,355,000. The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) in May, 1922, at 95, bearing interest at 4½ per cent. The Sinking Funds, contributions to which started in 1925, amounted to $11,031,088.

The following statement shows the assets and liabilities on the 31st December, 1929:

Assets and liabilities.

LIABILITIES.		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		1,909,463	55
Sundry Outstanding Accounts		437,4.6	23
Due to India (Agency Account)		127,660	14
,, ,, (Current Account)		82,867	11
Ceylon Agency Account ...		29,795	41
Family Remittances		4,437	63
S.S. Government War Service Land Grant Scheme		5,278	63
Deposits—			
Courts	$401,370.25		
Forests	322,785.78		
Lands	476,875.65		
Postal	273,941.02		
Postal A/c Store—Colony	300,000.00		
Planters' Loan Board	525,000.00		
Miscellaneous ...	889,017.44		
		3,188,990	14
Railway Renewals Reserve ...		10,733,538	39
Sundry Funds—			
Bailey Fund ..	$ 900.00		
Police Fine, etc., Fund	36,534.43		
Public Officers' Guarantee Fund	280,230.10		
Malayan Flood Relief Fund ...	55,505.67		
Victoria Institution Building Fund	104,105.94		
Composition Stamp Duty Fund	314,888.65		
Phillips Agricultural School Scholarship Fund	4,338.39		
Miscellaneous ...	42,102.78		
		838,605	96
War Savings Certificates, 1924-1927		280	00
Singapore Naval Base Contribution Account		6,857,142	85
Opium Revenue Replacement Reserve Fund		20,948,990	26
Suspense		84,610	31
Capital Fund—Bagan Serai Rice Mill		382,429	73
Capital Fund—Kuala Kurau Rice Mill		250,000	00
Capital Fund—F. M. S. Government Factory		400,000	00
Surplus—			
Reserved for Railway Capital Expenditure and Public Works, Special Services ..	$36,598,849.00		
Balance unallocated	43,419,724.97		
		80,018,573	97
		126,300,139	11

ASSETS.		$	c.
Cash in Treasuries and Banks as per distribution statement		4,464,134	04
Cash with Agencies—			
Crown Agents	$ 11,237.14		
Malayan Information Agency	6,115.37		
Penang Agency	43,114.44		
Singapore Agency	238,803.93		
		299,270	88
Cash in Transit		333,905	93
Fixed Deposits		23,100,000	00
Joint Colonial Fund		7,349,999	99
Investments (Surplus Funds)—			
S.S. Municipal Debentures (at cost)	$ 6,500.00		
Sterling Securities	10,839,793.66		
Perak River Hydro-Electric Power Co., Ltd.	4,928,571.43		
Nipah Distilleries of Malaya Ltd.	42,857.15		
	15,817,722.24		
Less Redemption Reserve ...	30,334.00		
		15,787,388	24
Investment—Singapore Naval Base Contribution Account		6,857,142	85
Investment—Opium Revenue Replacement Reserve Fund		20,551,519	25
Investments (Specific Fund) (at cost)—			
Bailey Fund	$ 900.00		
Police Fine and Reward Fund ...	33,340.83		
Public Officers' Guarantee Fund	275,283.62		
Malayan Flood Relief Fund ...	55,505.67		
V. I. Building Fund	103,205.94		
Security Deposits Account ...	9,027.97		
Phillips Agricultural School Scholarship Fund	4,338.39		
Composition Stamp Duty Fund, 4½ per cent. with Crown Agents	314,888.65		
		796,491	07
Family Remittances		1,199	98
Due by other Governments—			
Ceylon	$ 891.07		
Crown Agents	1,465.68		
Johore	34,483.83		
Kedah	1,653.23		
Kelantan	4,840.76		
Singapore	28,155.98		
Trengganu	15,976.35		
		87,466	90
Sundry Outstanding Accounts		59,991	93
Loans—			
Siamese Government (*b*) ...	$33,745,204.09		
Brunei Government	399,000.00		
Planters	1,891,267.23		
War Service Land Grant Scheme	1,733,590.77		
Agricultural	46,210.91		
Buildings	399,103.59		
Miscellaneous	1,704,264.66		
		39,918,641	25
Advances		131,980	76
Imprests		94,020	85
Bentong Tailing Retention Scheme		240,031	16
Stores and Materials Account, Railways ...		3,386,926	20
,, ,, ,, Post Office ...		962,033	36
,, ,, ,, P.W.D.		142,130	51
,, ,, ,, Electrical Board		551,905	70
,, ,, ,, Timber Branch ...		9,211	25
,, ,, ,, Marine Slipway ...		47,365	01
Marine Slipway Account		15,064	74
Inter-Treasury Accounts		63	63
Suspense		70,175	18
Bagan Serai Rice Mill		382,429	73
Kuala Kurau Rice Mill		250,000	00
F.M.S. Government Factory		400,000	00
Miscellaneous Stock Accounts		9,648	72
		126,300,139	11

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

The Loan to Siam.

The loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments beginning on the 1st January, 1924, stood at $33,745,204 on the 31st December, 1929 having been reduced by the payment of the sixth instalment due on 1st January, 1929. As this loan is being repaid by equal yearly payments to include both principal and interest, the principal part of the instalments will steadily increase.

Loans to Perlis and Brunei.

The loan to Perlis which stood at $50,000 on 31st December, 1928, has been repaid in full, while that to Brunei, which stood at $403,000 on 31st December, 1928, has been reduced to $399,000 by the payment of the annual instalment due in 1929.

Surplus.

The surplus on 31st December, 1928, was $82,879,965. As the expenditure for the year exceeded the revenue by $2,861,391, the surplus was reduced to $80,018,574 on 31st December, 1929, of which a sum of $36,598,849 has been reserved for Railway capital expenditure and public works, leaving a balance of $43,419,725 unallocated on 31st December, 1929.

The liquid assets, comprising cash, fixed deposits, Joint Colonial Fund and easily realisable investments amounted to $46,393,605 at the end of the year, as compared with $46,304,028 at the beginning. This does not take into consideration the investments earmarked for certain specific funds.

Singapore Naval Base.

To meet payments of the contribution of £2,000,000 towards the cost of the Singapore Naval Base, investments worth £2,000,000 were set aside in 1926 to form a specific fund. Up to the 31st December, 1929, payments amounting in all to £1,200,000 had been made to the Admiralty, War Office and Air Ministry, leaving a balance on the fund of £800,000.

Opium Revenue Replacement Reserve Fund.

The Opium Revenue Replacement Reserve Fund stood at $20,948,990 on 31st December, 1929, of which $20,551,519 was represented by investments and the balance by cash awaiting investment. This fund was started with $10,000,000 provided out of revenue in 1925, to which has been added 15 per cent. of the annual revenue from chandu sales together with the accumulated interest. The yearly contributions from revenue were as follows:

1926	$2,385,616
1927	2,242,500
1928	1,906,521
1929	1,859,971
	$8,394,608

Railway Renewals Reserve Fund.

The Railway Renewals Reserve Fund stood at $10,733,538 on 31st December, 1929. The contribution added in respect of the year 1929 was $5,355,876.

Sterling loan capital account.

A statement of sterling loan capital account is published as Appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on railway and other works up to 31st December, 1929, accounted for $72,388,086, leaving a balance of $1,909,463 still available to meet capital expenditure during 1930. This balance is in excess of the estimated balance of $1,700,000, due to a refund of about $200,000 made by the Railway.

III.—PRODUCTION.

AGRICULTURE.

Staff.

The establishment of the Department of Agriculture including the Director of Agriculture comprised 46 European Officers. Of these 30 were on the research staff, one was Agricultural Instructor, and one was seconded for service in Johore. Five of these appointments were not filled, while two officers were seconded, one to the Rubber Research Institute and the other to the Co-operative Department.

At the beginning of the year the title of Director of Agriculture was substituted for that of Secretary for Agriculture and Dr. H. A. Tempany, formerly Director of Agriculture, Mauritius, was appointed to the post.

Organisation and policy.

During the year much attention was devoted to the organisation of the department and to the question of formulating a definite agricultural policy.

An attempt was made to survey the various lines of activities of the department and to put forward proposals co-ordinating the work of the different divisions and laying down a definite line of policy for the future. These proposals included the reorganisation of the work of a number of divisions and occupied a considerable amount of time.

Rubber.

The area under rubber in the Federated Malay States at the end of 1929 was estimated to be 1,461,300 acres; the export from the Federated Malay States was 261,353 tons for the year and the average price of smoked sheet during the first quarter was 38 cents per pound, after which time the price gradually declined to 35 cents in August, 34 in September, 31 in October and 25 cents in November. There were signs of a slight rally in

December, but prices declined again towards the end of the year, when kampong unsmoked sheet was being sold at $27 a pikul, which is equivalent to slightly over 20 cents a pound.

The chief feature is the continued interest taken in budding. There has been a large increase in the importation of budwood of high yielding clones from the Dutch East Indies and considerable quantities of budwood are also being raised in this country.

Manuring problems are also attracting increased attention; investigations indicate that on certain types of soil potash is deficient and it is anticipated that the application of potash fertilisers will produce results of economic value.

Much interest is also being taken in the question of soil conservation on a number of estates.

No new disease of importance has been reported. Mouldy Rot still continues the most important disease and requires constant attention on the part of the inspection staff. Attention may be drawn to the increase in the incidence of Mildew leaf disease caused by *Oidium Hevea*, and areas in several districts during the year were reported as being affected with secondary or abnormal leaf fall, which was diagnosed as due to oidium.

Considerable interest is being taken in replanting problems on estates on which the tapping systems, loss of soil and root diseases are responsible for decreasing yields of latex. The most difficult probiem is that of the reconditioning of soils for replanting.

Interest is being taken in the problem of the substitution of air-dried sheet for smoked sheet and experimental work on this question is being carried out. The export of concentrated latex (Revertex) is increasing.

Padi. The area planted with *padi* in the Federated Malay States was approximately 175,227 acres, from which a crop of approximately thirty-one and a half million gantangs was obtained. In Krian planting was very late. On the whole the 1928-1929 season must be considered a poor one owing to the very poor crop harvested in Krian, which is the most important *padi* area in the Straits Settlements and Federated Malay States, although fair yields were obtained over a large part of Selangor, Negri Sembilan and Pahang. Considerable damage was recorded by stem borers in the Krian area. The investigation of *padi* borers was undertaken by the Entomological Division and work was started on the possibility of controlling these insects by means of the breeding and liberation of the parasites, *Trichogramma sp.* The selected strains of Krian *padi* continue to give satisfactory results, but in spite of the fact that considerable quantities of seed were distributed, the planting of these strains has not as yet become by any means general. Experiments were continued on the storage of rice and results so far to hand indicate that, given adequate protection from insect pests, rice can be stored in good condition for a period up to 12 months. The campaign for the destruction of rats in the Krian area was continued throughout the year, 601,481 tails being collected.

Coconuts.

A further decline in the price of copra was recorded. For fair merchantable quality the Singapore market opened at $10 per pikul and by the middle of the year fell to $8 per pikul, thereafter showing a slight upward tendency, until by the end of the year prices ranged round $9 per pikul.

The nettle caterpillar, *Setora nitens*, appeared in fairly large numbers in Lower Perak, the attack being more prolonged and serious than usual. Measures of control were carried out in conjunction with planters in the district. A series of local outbreaks of the leaf eating caterpillar, *Artona catoxantha*, occurred in Krian, East Pahang and Johore.

The question of the quality of Malayan copra continued to attract attention and a scheme was instituted for research work on this subject, an Assistant Chemist being specially appointed. The cost of this research is partly contributed by the Empire Marketing Board. Arrangements were concluded for taking a census of coconuts in connection with the World's Agricultural Census, 1930.

Oil palms.

The oil palm industry continued to expand. The total area planted in the Federated Malay States is 22,558 acres. The production of palm-oil for the year was 1,819 tons, while the figure for palm kernels was 301 tons. Experimental work on the crop was continued by the Department of Agriculture and a palm-oil factory was erected at Serdang to handle the crop planted at the Experiment Station and enable experiments in manufacture to be carried out.

Tea.

At the end of 1929 the total area planted with tea amounted to about 600 acres. Interest continues to attach to tea cultivation, particularly in the Cameron's Highlands area. Plans have been formulated for the extension of investigations on the crop, and arrangements have been made for the despatch of a trained Agriculturist to Ceylon, Southern India and Assam, for the purpose of studying tea cultivation and manufacture in those centres.

Pineapples.

The total area planted with pineapples was estimated to be 477 acres. Considerable attention has been paid during the year to the extension of the market for pineapples by means of exhibits and demonstrations given at various exhibitions, the Empire Marketing Board and the Malayan Information Agency collaborating in the work, with the assistance of the Department of Agriculture in Malaya. The question of establishing an experiment station for the investigation of problems in relation to pineapple cultivation received consideration during the year.

Coffee.

Interest in coffee cultivation was maintained; scope exists for a considerable increase in the planted area to meet local demands. Exports from the Federated Malay States amounted to 2,433 tons. Considerable damage was recorded from certain estates owing to the attack of the beetle berry, *Cryphalus hampei* Ferr. Its distribution is apparently confined to Selangor, Negri Sembilan and Malacca.

Government Experimental Plantation.

The total area opened at the plantation was 800 acres. The work of the Experimental Station was maintained on the same lines as in previous years and continues to prove of considerable interest, numerous visits being paid by planters. A further area of 30 acres of tea was laid down, while improvements were introduced in relation to the stock farm, and a small laboratory for work in connection with the oil palm investigation was built.

Experimental Station at Cameron's Highlands.

The Experimental Station at Cameron's Highlands was maintained. It was decided during the year, owing to the requirements of the military authorities, to remove the station from the present site at Tanah Rata to Ringlet.

Soils.

The soil survey of the Peninsula has been continued and work has been extended during 1929 to alluvial soils.

School of Agriculture.

The erection of the School of Agriculture at Serdang was begun. It is anticipated that the school will be ready for occupation in May, 1931.

FORESTRY.

General.

With the completion of the Forest Research Institute at Kepong and the opening of the timber-testing laboratories at Sentul, the forest organisation is now well provided with equipment to deal with the many-sided problems of forest research. The provision of personnel for research, in particular for the conduct of silvicultural investigations and the preparation of working plans, is still a matter of some difficulty. Progress was made with the project for departmental timber operations at Palong, notwithstanding certain delaying factors, such as the necessity which became apparent for a change in the mill site.

Staff.

The retirement in December of Mr. G. E. S. Cubitt, to whose vision and initiative is due so much of the success achieved in organising the forest resources of the country as a permanent and productive asset, is recorded with regret.

At the close of the year the senior staff of all three branches of the Forest Department consisted of 44 officers, exclusive of one probationer under training at the Imperial Forestry Institute. Three officers retired, one was killed in an air accident while returning from leave, and one was invalided out of the service. There were four new appointments to the Forest Branch, and one to the Timber Branch. Two Assistant Conservators remained seconded to Johore and one to Kedah.

The strength of the locally engaged English-speaking staff was fifteen officers in all, five Extra Assistant Conservators and ten Sub-Assistants, including probationers; the number is considerably below requirements. One Extra Assistant was seconded from the Forest to the Timber Branch throughout the year.

The sanctioned strength of the subordinate staff was 517 exclusive of about 75 clerks, 46 boatmen, the permanent labour force and menials. The figure given for clerks does not include the temporary clerical staff of the Timber Branch.

Reserved forest.

The work of exploration and formation of reserves proceeded normally and the year closed with 6,271 square miles of forest reserved and 1,182 square miles proposed for reservation. A large part of the reserved area consists of protective forest on steep slopes and at high elevations, much of which will never be capable of producing timber. Except in a tract of limited extent, where some reserves will be needed for the supply of local requirements, reservation in the three western States is approaching finality.

Output.

The outturn of timber, fuel and charcoal, exclusive of free supply, was 806,333 tons as against 801,348 in 1928. The consumption of firewood again decreased owing to the depressed condition of the tin market and the intensifying competition of coal, oil and electricity. Twenty-four per cent. of the timber and 56 per cent. of the fuel produced was derived from reserves. The depletion of State lands is proceeding steadily and is far advanced in Perak.

There was a considerable decline in revenue from minor produce, mainly owing to the depressed condition of the *damar* market. There was however an increased output of *jelutong*, and the prospects in this direction are hopeful. Chemical research, mainly in the minor forest products, continued with satisfactory results, and Forest Record No. 7 "Mangrove Bark as a Tanning Material", by Dr. T. A. Buckley, Forest Chemist, was published during the year.

Publications.

Mr. J. G. Watson's treatise on "Mangrove Forests of the Malay Peninsula" (Forest Record No. 6) appeared early in the year. It represents the fruits of many years' work and will contribute materially to the efficient management of a valuable forest asset.

MINING.

Export of tin.

The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 67,041 tons compared with 61,935 tons in 1928 and 52,179 tons in 1927. The export of tin-ore represents about 98.5 per cent. of the total. The 1929 exports were the highest ever recorded, exceeding the previous year's figure, which was a record, by over 5,000 tons. The export duty (in millions of dollars) was $14.5 in 1929, $15.1 in 1928, and $17.4 in 1927.

Price of tin.

The price of tin at the beginning of the year was $114.87½ per pikul. This improved to $115.50 by the 7th of February, which was the highest price quoted throughout the year. From then onwards the price deteriorated steadily, until the lowest price for the year was quoted, namely, $89.25 per pikul on the 8th December. This was the lowest figure to which the price had fallen since 1923.

At the close of the year the price was $90.75 per pikul. The average price for the year was $104.37½ per pikul, which was $9.81½ lower than the average price for 1928.

Fluctuations in price of tin.

The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

Heading.	1923.	1924.	1925.	1926.	1927.	1928.	1929.
	$	$	$	$	$	$	$
Highest ...	121.00	148.00	145.50	157.50	159.00	131.50	115.50
Average ...	101.75	124.19	131.77½	144.59	144.93	114.18	104.37½
Lowest ...	88.50	100.75	116.00	131.75	127.37	103.62½	89.25

Labour.

The labour force engaged in mining (including dulang pass holders) was 113,415 at the end of the year. The figures for the preceding three years were: in 1928, 119,550; in 1927, 130,424 and in 1926, 116,216. The total does not include labour employed on the extraction and transport of firewood.

Labour was plentiful and slightly cheaper than in 1928. There was a certain amount of unemployment but it was not serious.

Tungsten ores.

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for this and the previous year:

	Wolfram.	Scheelite.
1929	44.1 tons ...	280 tons
1928	5.0 ,, ...	Nil

The increased output was due to the enhanced price of the commodity.

Gold.

The production of gold from the Raub Gold Mines was 23,303 ounces as compared with 16,815 ounces in 1928. In addition alluvial gold was recovered in various places to the extent of 3,399 ounces.

Coal.

The production of coal from the Malayan Collieries Ltd., Selangor, was 661,514 tons, an increase of 104,924 tons on the previous year, while consumption was as follows:

Federated Malay States Railways	238,602	tons
Mines	297,486	,,
Other Federated Malay States consumers ...	86,543	,,
Exported	585	,,
Consumed at the Collieries	38,298	,,
Total ...	661,514	,,

Other than the above there is no mine producing coal in the Federated Malay States.

Dredging.

The output from dredges again showed a substantial increase. The proportion of the total output so won was 38 per cent. as against 30 per cent. in 1928 and 24 per cent. in 1927.

At the end of 1929 the number of dredges at work was 105, the number under construction 10, and the number on order 8.

Gravel pumps.

Gravel pump mining produced 41 per cent. of the total output. The number of such pumps in use at the end of 1929 was 618 as against 667 in 1928 and 645 in 1927.

Theft of ore.

One report only of theft of ore from a mine was made during the year. On investigation it appeared doubtful as to whether a theft had actually occurred. Only a small quantity of ore was involved.

"Bulletin of Statistics."

A "Bulletin of Statistics" relating to the mining industry was compiled and published monthly, the first number being issued in February. It is retailed to the public at 25 cents a copy and commands a ready sale.

IV.—TRADE AND ECONOMICS.

Trade.

The aggregate value of trade for the year 1929 was $550,406,000, an increase of $80,409,047 or 17.11 per cent. as compared with the year 1928, chiefly due to the large increase in the quantity of rubber exported. The average price of rubber for the year was 34.45 cents per lb. The highest price was reached in March, when it averaged 42.94 cents per lb. In December the average price dropped to 26.53 cents per lb. The average price of standard tin for the year was $104.37½ per pikul. The peak was reached on 7th February, when it was $115.50 per pikul. On 8th December it dropped to $89.25 per pikul—the lowest price during the year.

The distribution of trade per head of the population was $352 as compared with $306 in 1928.

The total values of imports and exports (including re-exports, bullion, and parcels post) for the last six years are as follows :

Year.	Imports	Exports and re-exports.	Favourable trade balance.
	$	$	$
1924	97,436,302	212,884,740	115,448,438
1925	137,116,207	411,878,610	274,762,403
1926	173,887,724	445,600,203	271,712,479
1927	176,161,194	339,925,603	163,764,409
1928	191,473,471	278,523,482	87,050,011
1929	201,393,405	349,012,595	147,619,190

Distribution of trade.

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years was as follows :

IMPORTS.

Countries from which imported.	1927.	1928.	1929.
Singapore	39.78	37.74	35.12
Penang	18.90	16.90	20.47
Malacca	1.06	1.26	1.92
Unfederated Malay States	1.11	1.18	2.07
United Kingdom	15.53	17.69	14.04
British Possessions	5.78	5.50	6.16
Continent of Europe	5.56	5.17	5.42
Other Foreign Countries	12.28	14.56	14.80
	100%	100%	100%

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1927.	1928.	1929.
Singapore	22.61	24.26	23.31
Penang	32.32	36.86	29.48
Malacca	2.58	2.47	1.89
Unfederated Malay States	.30	.28	.29
United Kingdom	18.22	10.69	12.73
British Possessions	1.08	1.06	1.34
United States of America	19.15	20.14	25.30
Other Foreign Countries	3.74	4.24	5.66
	100%	100%	100%

Revenue.

The total revenue collected by the Customs, Excise and Chandu Branches of the Trade and Customs Department amounted to $46,341,439 being an increase of $2,073,362 as compared with 1928.

Import duties.

Import duties contributed $11,105,912 as against $8,821,237 collected in 1928.

Export duties.

Export duties aggregated $19,990,300 as compared with $20,010,346 in 1928—a decrease of $20,046.

Excise duties.

Excise duties, licences, etc., produced $2,785,756 as against $2,475,000 in 1928—an increase of $310,751.

A new distillery with modern plant was erected during the year. The old inefficient methods of saccharification and fermentation were however still employed, and the very acid mash produced was found to dissolve copper from the distillation plant. Later on, lead in addition to copper was found in the distillate, the result apparently of cracks and joints in the worm being sealed with solder.

Investigations carried out by Mr. W. Caldwell, an Engineer-Chemist, whose services were employed for research, have resulted in the discovery of a process of distilling samsu from rice, which has been demonstrated on a laboratory scale to give most efficient results. It is hoped that the process will soon be developed on a commercial scale.

Opium. The net revenue from the Chandu Monopoly was $12,392,378 as compared with $12,717,567 in 1928, being a decrease of $325,189.

Under minor headings the sum of $67,093 was collected.

Shipping. The total number of vessels, exclusive of native craft, entered and cleared at the various ports of the Federated Malay States was 13,190 with a tonnage of 7,757,599½ shewing an increase of 1,518 and 652,989½ in number and tonnage, respectively, compared with the figures for the year 1928.

The number and tonnage of ocean-going steamers entered and cleared at Port Swettenham were 1,431 vessels and 5,623,425 tons as compared with 1,329 vessels and 5,076,855 tons in 1928, being an increase of 546,570 tons.

The number of ocean-going steamers which came alongside the wharf was 365 against 315 in the previous year.

The largest vessel entering the port was s.s. "Achilles" (British) of 11,426 tons, whilst the deepest draft vessel entering the port was s.s. "Afrika" (Danish) drawing 31′ 7″ of water.

COMPANIES.

During the year 47 local companies with a total nominal capital of $23,602,658 were incorporated and registered as compared with 45 companies ($37,665,613) in 1928, 48 companies ($25,008,570) in 1927 and 56 companies ($35,764,500) in 1926.

The main objects of the new local companies were rubber, tea and coffee planting (10), mining (11), mining and rubber planting (6), exchange share brokers and agents (6), printing and publishing (2), and general trading (3).

One company for each of the following purposes was formed—coconut planting, cinema, sanatorium, banking, tailoring and hosiery, air services, motors and motor engineering, soap and aerated water manufacturing and oil extracting.

The number of companies in liquidation in 1929 was 21, and during the year one local company was struck off the register as defunct.

There were 667 companies on the register at the end of the year.

BANKRUPTCY.

During the year 208 bankruptcy notices were issued, 88 bankruptcy petitions were filed, and 43 receiving orders and 39 adjudication orders were made.

Of the 39 persons adjudged bankrupt during the year, 17 were Chinese, 16 natives of India, four Malays, one Japanese and one Ceylonese. By occupation four were miners, ten traders, six clerks, five contractors, two landowners, two drivers, one milk-seller, one grass-cutter and eight miscellaneous.

There was an increase in the work in the States of Perak and Selangor as compared with the preceding years.

Three compositions were approved by the Court.

There were five criminal proceedings in bankruptcy.

Twenty-two applications were made for discharge, of which 14 were granted.

The gross liabilities and assets as given by the debtors amounted to $596,437 and $136,830 respectively.

CO-OPERATION.

The Director of Co-operation was in charge of the department Staff. throughout the year. One Assistant Director went on deputation to India on 11th November, 1928, and examined certain aspects of Co-operation in Madras, the Punjab and Bombay until 19th January, 1929, when he proceeded on leave. Towards the end of the year he spent four months investigating the working of certain co-operative institutions in Belgium, Switzerland Italy and Ceylon before returning to Malaya. The other Assistant Director helped to supervise societies in Perlis, Kedah, Penang and Province Wellesley, Perak, Selangor, Negri Sembilan, Pahang, Malacca and Singapore. The first Co-operative Rubber Organisation Officer, who was stationed in Penang, helped with the general work in that Settlement and northern Perak, as there was no Malayan Civil Service Officer available to take the place of the Assistant Director on leave and special deputation.

The Asiatic staff consisted of one Assistant Registrar of Co-operative Societies, one Auditor and Accountant, one Senior Malay Co-operative Officer and eight Malay Co-operative Officers, of whom four held substantive appointments, two were on probation and two were seconded from the Malay Officers' Administrative Branch. Seven Junior Malay Co-operative Officers were appointed in addition, of whom five held their appointments substantively and two were acting. The remainder of the staff comprised one Urban Co-operative Officer, one Superintendent, five senior and two junior Indian Co-operative Officers, seven clerks, two clerk-typists and one stenographer.

Difficulty was still experienced in recruiting and training, under adverse conditions, officers of suitable educational qualifications, character and experience.

Expenditure.

The expenditure, inclusive of the salaries of the European staff, was $174,949.61.

Progress.

The following statistics reveal the position on the 30th June, 1929, which is the end of the Co-operative year:

	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Agricultural Rural Credit Societies ...	79	2,538	92,876	19,349	135,609
Non-Agricultural Thrift and Loan Societies	26	14,120	2,124,745	88,120	2,278,795
Indian Estate Labourers' Societies	33	7,104	74,128	88	75,888
Total ...	138	23,762	2,291,749	107,557	2,490,292

Rural credit societies.

A further decrease in membership of the Rural Credit Societies took place. Three societies were under liquidation at the end of the Co-operative year. The process of gradually weeding out unsatisfactory members and societies was continued. It is necessary to realise that quality is more important than quantity. Eight hundred and forty loans amounting to $66,910 were granted, as against 888 loans amounting to $71,292 in the previous year. The total profit earned amounted to $12,208, compared with $6,013 in 1928. Three societies worked at a loss of $310, as compared with a loss of $1,064 in 1928. Overdue loans decreased slightly.

Thrift and loan societies.

Continuous and steady progress was made in the Thrift and Loan Societies. Societies now exist for the benefit of all Government servants in the Federation, and also for all mercantile employees in Perak and Selangor. The term "mercantile" includes all persons not employed by Government. The subscribed capital of the Selangor Government Servants, Posts and Telegraphs and Jaffnese Societies, in each case, is well over $200,000 whilst that of the Railways has long since passed $500,000. The need for the education of committees and members in co-operative practice and principles is, however, very real and ever present. Membership showed an increase of 1,798. The total paid-up subscriptions increased from $1,727,287 in 1928 to $2,124,745 and the Reserve Funds from $54,721 to $88,120. Five thousand and sixty-six loans amounting to $1,428,519 were granted to salary earners during the year, as against 5,572 loans amounting to $1,576,453 in 1928. Surplus assets have substantially increased. Money invested in gilt-edged securities or fixed deposits in banks and cash amounted to $764,497 on 30th June, 1928. On 30th June, 1929, the amount was $1,250,665. The work done by these societies in extricating the salary earner from debt, furnishing him with legitimate and controlled credit facilities and affording him the opportunity for saving a portion of his income regularly, is slowly but surely winning the support of heads of departments, firms and business houses.

Indian estate labourers' societies.

Substantial progress has been made in the organisation of Indian Estate Labourers' societies in Selangor and Negri Sembilan. The demand for their formation, which has now come from all District Planters' Associations in the country, far exceeded the capacity of the department to cope with it. Twenty-one new societies were registered. On 30th June, 1929, 33 societies existed as against 12 in 1928. Membership rose from 2,330 to 7,104. Paid-up share capital increased from $22,720 to $74,128 and the working capital amounted to $75,888.

Co-operative rubber factories.

The Agriculturist (Rubber), seconded from the Agricultural Department, whilst on leave examined some co-operative creamery societies in Ireland to see how their marketing organisation might be adopted to the proposed co-operative rubber factories for small holders in this country. The first Co-operative Rubber Organisation Officer was transferred to Penang on 16th November, 1928, to take charge of the Penang office during the absence of an Assistant Director on leave and to make investigations as to the feasibility of organising factories in Perak. A second European planter was appointed as a

Co-operative Rubber Organisation Officer on the 21st December, 1928. Two Malay officers were detailed for rubber work. The initial difficulties are gradually being overcome. In three places share capital is being collected to pay for the buildings, machines and other equipment. At other centres propaganda work was undertaken.

Mr. Strickland's visit. The outstanding event of the year was the visit of Mr. C. F. Strickland, I.C.S., and the publication of his report, which was tabled at the Federal Council meeting on the 4th November. This report should be closely and carefully studied by all who are interested in the Co-operative movement in Malaya and have the welfare of the country at heart.

Film propaganda. A cinema film illustrating the virtue of thrift and the vice of extravagance, with passing reference to the functions of a rural credit society in the life of Malay peasants, was prepared by the officers of the department. It attracted considerable attention and is undoubtedly of real educative value. Further intensive propaganda along these lines, including co-operation with the Department of Agriculture and the Rubber Research Institute, by means of a travelling film van is foreshadowed.

General. The Co-operation Board met five times during the year, and one staff conference was held at Kuala Lumpur.

Generally speaking, the year was one of consolidation and steady progress along conservative and orthodox lines.

V.—COMMUNICATIONS.

POSTS AND TELEGRAPHS.

Postal. The head-quarters of the Posts and Telegraphs Department in Perak were transferred from Taiping to Ipoh on the 7th January. There are now 106 post offices, and 67 places at which postal business is transacted by railway station-masters and others acting as postal agents. The estimated number of articles posted and delivered in 1929 was nearly 42 millions.

Money orders. Money orders numbering 399,485 were issued and paid, the total representing $19,904,436, an increase of 46,041 in number and of $811,490 in value. Telegraph money orders numbering 16,190 for $1,372,757 were issued and paid.

Savings Bank. The number of Savings Bank depositors on the 31st December was 42,956, an increase of 5,920 during the year. The average amount standing to the credit of depositors remained at $106. The excess of deposits over withdrawals during the year was $1,108,555. The number of Malay depositors increased from 8,004 to 9,429.

Telegraphs.

The number of telegrams despatched and delivered was 901,742, an increase of 18,470.

Telephones.

The number of direct exchange lines connected to the telephone system at the 31st December was 5,075, an increase of 541 compared with 1928. There were also 2,403 miscellaneous circuits, such as extension lines, extension bells, private lines, private bell or alarm circuit and tell-tale clock circuits maintained by the department, an increase of 226. On the 31st December, there were 3,084 miles of telegraph and telephone lines, and 24,607 miles of overhead wires, of which 21,444 miles were telephone wires. In addition there were 144 miles of underground cable, the length of single wire in the cable being 13,100 miles. These figures do not include railway wires, nor the 123 miles of line (611 miles of wire) owned and maintained by the department in Johore. Six additional public telephone exchanges were opened during the year, at Ampang, Dengkil, Enggor, Kapar, Mentakab and Petaling. Many new trunk and junction lines were established to connect these exchanges with the system and to meet increased traffic. The trunk telephone revenue was $463,155, an increase of more than 20 per cent. over the figures for 1928.

Progress has been made with the arrangements for the provision of a new exchange of the automatic type to replace the existing Kuala Lumpur exchange. The contract for the installation of the necessary equipment was placed in September, with Messrs. Ericcsons Telephone Manufacturing Company, Limited, Beeston, Nottingham, England.

The "carrier current" system of telephony was brought into use between Kuala Lumpur and Ipoh on the 1st June, thereby providing three additional speech channels and a much more rapid service between these two exchanges. These channels have worked satisfactorily for the period during which they have been in use.

The question of providing direct telephonic speech channels between Singapore, Kuala Lumpur and Bukit Mertajam was still under discussion at the end of the year.

Financial.

The net revenue collected by the department was $3,199,655, an increase of $279,674. Annually recurrent expenditure amounted to $2,381,195, and special expenditure (including loan account) to $874,945. The value of the services performed free of charge for other Government departments, estimated at $182,262, is not included in these figures, which also exclude temporary and acting allowances amounting to $230,247.

Wireless

The Petaling Hill Wireless Station in Kuala Lumpur was practically rebuilt in the course of the year, and a half kilowatt short-wave set was installed there on a permanent basis. A store, workshop and quarters for the operating staff have been built on the site. This station is now in daily communication with the various wireless stations in Pahang. As part of the Flood Emergency Scheme, wireless stations were maintained throughout the year at Kuala Pahang, Kuala Lipis, Kuantan, Mentakab and Temerloh.

A wireless station, equipped with a half kilowatt set, was opened at Port Swettenham on the 1st April, for communication with ship stations; and two low-power medium-wave wireless stations were erected for the Police Department, one at Port Swettenham and the other at Pulau Ketam, to provide telephonic communication between these two places.

Air mails.

Arrangements were made in August for the despatch of mails to connect once a fortnight with Imperial Airways Karachi-London air mail service; and in November, an alteration in the date of departure of the homeward-bound aeroplanes permitted a weekly connection from Malaya. Facilities are also offered in this country for the utilisation of air mail services operating in Australia.

RAILWAYS.

General.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying two lines of rail and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the West Coast and the East Coast lines.

The West Coast line runs north-north-west through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang harbour about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on 1st July, 1918, the distance between Singapore and Bangkok being 1,194 miles.

The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, in Kelantan. It is completed and opened for traffic as far as Merapoh Station. 43 miles beyond Kuala Lipis, the capital of Pahang, 184½ miles from Gemas and 321½ miles from Singapore. Merapoh is the last station in Pahang territory and is about three miles from the frontier. By the close of the year permanent way had been laid to a distance of about 26 miles beyond the Kelantan frontier. At the other end a section of 63 miles extending from Tumpat—the port of Kelantan—to Manek Urai at the crossing of the Lebir River has been completed and opened for traffic. This line when extended southward will meet the line from Gemas and provide through direct communication with Singapore from Kelantan. Construction is in progress southwards of Manek Urai towards Pahang. A branch line 13 miles long has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam started on 1st November, 1921.

Branch lines connect the main line with the ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld.

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak, Kuang-Batang Berjuntai, 14 miles, Kuala Lumpur-Batu Caves, eight miles, Sungei Besi-Sultan Street, eight miles, Sultan Street-Ampang, six miles, Connaught Bridge Junction-Kuala Selangor, 30 miles, all in Selangor, and Bahau-Kuala Pilah, 13 miles, in Negri Sembilan.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,037 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are equipped with restaurant cars and sleeping saloons of a very high standard.

There are 256 permanent stations and 38 flag stations.

Financial.

The expenditure on capital account (including lines not yet open for traffic) was $224,415,465 up to 31st December, 1929, of which $177,230,210 was met from revenue and $47,185,255 from loan account.

The receipts in 1929 from all sources were $23,331,618, an increase of 4.4 per cent.; expenditure chargeable to revenue on all accounts amounted to $21,518,791, an increase of 8.92 per cent.; the latter sum includes an amount of $5,355,876 appropriated to the Railway Renewals Reserve. The net surplus for the year's working therefore amounted to $1,812,827 compared with $2,591,709 in 1928. The expenditure met from the Railway Renewals and Betterment Fund during the year amounted to $3,664,385 and there was a sum of $10,733,538 standing to the credit of that Fund on the 31st December, 1929.

It is noteworthy that the receipts from all sources during the year 1929 were the highest yet recorded in the history of the Railway.

Rates. There were no changes in the general rates and fares.

Train control. A system of train control introduced in January, 1922, over a busy section of the line has proved very satisfactory in controlling the movement of rolling stock, checking unnecessary haulauge and, in case of breaches on the line, expeditiously restoring communication. The system has been extended and now controls the main line between Prai and Gemas (351 miles).

Passengers. The number of passengers carried was 14,087,281 compared with 13,475,070 in 1928. The total receipts from passengers show an increase of $120,269 (1.47 per cent.).

Goods. The receipts from goods train traffic amounted to $11,223,489 compared with $10,363,148 in 1928, an increase of $860,341 (8.3 per cent.).

Capital expenditure. During the year the net expenditure on capital account was $5,264,788 as compared with $7,569,315 in 1928.

Construction. In Kelantan at the north end platelaying was completed to the 82½ mile from Tumpat, besides the 26 miles mentioned above (at the south end) near the Pahang boundary. The distance between construction rail heads in Kelantan at the end of the year was about 31½ miles. Earthwork, etc., is well in hand over the whole section. Two tunnels at the 69th mile (from Tumpat) with a total length of 1,143 feet and one of 502 feet at 73½ mile have been completed. Out of the six tunnels between the 74th mile and 85th mile, two are nearing completion and work has well advanced in the other four. Work on the tunnel at the 94th mile has been temporarily closed down. The net expenditure on this section during the year amounted to $3,108,508.

A reconnaissance survey for the proposed new East Coast line southwards from a point near the Guillemard Bridge in Kelantan running through Trengganu and Pahang to Kulai in Johore was completed. The total length of the proposed line is 380 miles.

In Singapore work on the deviation of the railway between Bukit Timah and Tanjong Pagar was begun and proceeded satisfactorily.

A deviation of the main line near Taiping of approximately 15,171 feet was undertaken by arrangement with Kamunting Tin Dredging Limited. This was completed and opened for traffic on 23rd April. It resulted in the shortening of the main line by 3,282 feet, and the removal of Kamunting Station to a new site. The cost of the deviation was borne by Kamunting Tin Dredging Limited.

The remodelling of Ipoh Station Yard and the new Locomotive Depôt at Pumpan were completed on 2nd May.

Other works.

A housing scheme for the Railway subordinate, artisan and menial staff estimated to cost $4,765,800 was commenced in 1926 and on 31st December, 801 units had been completed and 502 units were in hand. The settlements at Sentul and Bungsar Road near Kuala Lumpur comprise the main portion of the scheme.

Railway Board.

The Railway Board held 12 meetings during the year. It is composed of three official and six unofficial members. Of the unofficials, two were appointed from the Colony, one residing in Singapore and the other in Penang.

ROADS.

Mileage.

The total mileage at the beginning of the year was 2,671 miles 64 chains, and maintenance costs worked out at an average of $1,435 per mile.

During the year, 62 miles 43 chains were added, making a total mileage at the close of the year of 2,734 miles 27 chains.

Improvements.

The policy of widening and straightening main roads and super-elevating curves to meet the requirements of modern traffic, was continued, as was also the work of surfacing roads with bituminous material, the proportion of roads thus treated being 51 per cent.

Enggor Bridge.

The Enggor Pontoon Bridge, which was damaged by floods at the close of 1928, was re-opened for traffic on the 3rd January. New overhead moorings have now been provided which, it is hoped, will diminish the risk of danger caused by the fouling of anchor chains by timber and debris in time of flood. Work was carried out continuously on the construction of the new bridge at Enggor, good progress being made during the latter part of the year.

General.

No serious flooding of roads occurred, though the Selangor River rose over its banks for a few days during November. There were also some minor landslips on the Pahang Trunk Road.

The new pontoon bridge at Blanja was opened to traffic by His Highness the Sultan of Perak on the 28th January, and there has been a marked increase of traffic across the Perak River at this point since the new bridge replaced the old ferry.

The Market Street Bridge at Kuala Lumpur was completed early in the year, and after having successfully passed its tests, was opened to traffic on 10th May. Its erection cost $134.928.

The policy of substituting permanent for timber bridges was pursued.

Traffic census.

The triennial traffic census was taken in June. The results shew that traffic is highest on roads joining large centres and running parallel to the railway.

Expenditure.

The total expenditure under "Special Services", Roads, Streets and Bridges during the year was $4.400.966.

VI.—POLICE AND PRISONS.

POLICE.

Crime.

The total number of seizable offences reported was 8,179 as against 7,239 in 1928 and an average of 6,762 for the years 1924-1928 inclusive. The year's total of serious crime, which includes murder, gang-robbery and robbery was 160, compared with 157 in the previous year.

The continuance of the slump in tin and rubber has had its inevitable effect on crime and reports of theft and house-breaking which in the prosperous years of 1924 and 1925 reached their lowest level have been steadily on the increase, particularly in the larger towns, to which the unemployed tend to gravitate.

The total number of all reports was 94,943 compared with 84,135 in 1928.

Staff.

The actual strength of the Force on the 31st December was 4,308 officers and men distributed in 43 District Headquarter Stations, 212 Police Stations and 16 Posts. At the close of the year there were 7 Gazetted Officers, 5 British Inspectors and 53 Subordinate Police Officers and Constables short of the approved strength.

Of the officers available for duty four were serving in Kedah at the close of the year, five in Johore, two in Trengganu and four in the Railway Department. Thirty per cent. of the officers are still on probation. Many of the probationary officers have done well as Officers-in-charge of Police Districts and in other posts, but a very considerable strain has been imposed on Chief Police Officers and other Senior Officers by the fact that so many posts have had to be filled by inexperienced officers.

Recruitment.

It was an extremely bad year for Malay recruitment in spite of the fact that the rubber slump continued. Only 268 Malays applied for enlistment compared with 615 in 1928 and a quinquennial average of 443. No difficulty was experienced in obtaining the necessary number of Indian recruits.

Training.

The training in drill and musketry was maintained at approximately the same level as previous years but owing to the shortage of ammunition (due to non-arrival of ammunition from the Crown Agents) no Malays or Indians in Negri Sembilan and Depôt fired the trained men's Musketry Course.

Instruction.

The Education Department was good enough to second five Malay teachers to the department from Tanjong Malim and since their arrival it has been found possible and profitable to re-organise the Depôt School, extend the curriculum and increase the school hours.

Good progress is being made by Indian recruits in the study of Romanised Malay and it seems certain that in time we shall have no illiterate constables in the Police Force.

The usual law studies were undertaken by the Probationary Officers under training and work was done on finger-prints, foot-prints, surveying, crime classification, station and court work, etc. It was found possible to admit to these classes a few of the well-educated Indian (Police) teachers. They have all done extremely well in examination and not only become more efficient in their classes but it is hoped that these men, in time, will qualify for appointment as Asiatic Inspectors.

The Police Warren Shield Team trained by Mr. Andrews at the Depôt took second place in this year's contest—a performance of which the Force in general and the Depôt in particular is justifiably proud.

Co-operative society.

The Federated Malay States Police Co-operative Thrift and Loan Society, Limited, started to operate in July, 1928, and has progressed successfully. It had a membership in December of 2,205. The subscriptions amounted to $35,380. The loans granted by the society totalled $10,382 in respect of 110 loans. The investments include £3,900 ($34,309). Since the formation of the society it has been impressed upon members that this is primarily a society for the encouragement of thrift and that loans are to be granted only in exceptional cases. Only 5.26 per cent. of the members have taken loans and so far there have been no defaulters.

Traffic Branch.

The Traffic Branches of Kuala Lumpur, Ipoh and Seremban, which were established on 1st April, 1928, 10th January, 1929, and 11th July, 1928, respectively, were responsible for a great deal of valuable work during the course of the year. Efforts were made to improve the efficiency of the Police in the control of traffic at points, etc., and in the parking of cars on the occasion of public functions. A high standard was required from applicants for driving licences and applicants had to appear before the testing officers on several occasions before a certificate of competency was granted.

In Pahang there is no Traffic Branch and the work was done by the Chief Police Officer personally and by the Officers-in-charge of Districts.

Criminal Registry.

The most noticeable feature of the year's work of the Criminal Registry is the increase of new registrations, the total for the year 1929 exceeding the total of 1928 by 1,625 and constituting a record for the Registry. During the year the Registrar succeeded in evolving a system of sub-classification of the most congested files (31/31) which has very greatly facilitated the work of searching for prints on these files.

Finger-prints of 1,897 deceased persons were received for search during the year and of these 85 resulted in identification of the bodies.

The Photographer who was formerly under the orders of the Director, Criminal Intelligence, now works under the Registrar of Criminals, his studio being in a part of the Registry Office.

A great number of articles and documents were sent to him during the year, in order that suspected latent finger-prints thereon might be brought out and photographed, but good results were not numerous.

Very useful work was done during the year by the Detective Branches in Perak, Selangor, and Negri Sembilan and for the tenth year in succession the Federated Malay States were kept clear of organised gangs of robbers. Detective Branch.

PRISONS.

There are six prisons in the Federated Malay States. On the 1st January they contained 1,092 prisoners against 1,123 on the 1st January, 1928; 6,644 were admitted; and 1,086 remained at the close of the year. The daily average figures were: Civil Prison, 170; short sentence and revenue grade, 555; long sentence and condemned, 446. Ten executions were carried out. No prisoners escaped. One prisoner committed suicide. The daily average of sick was 1.56 compared with 1.88 in 1928. There were 13 deaths, of which one was from valvular disease of the heart, one from apoplexy, four from cerebral haemorrhage and seven from other causes. General.

The total expenditure of the department was $492,804. The daily average of 1,171 prisoners was maintained at a net cost of $433,144, giving an annual cost per head of $369. The annual cost in 1928 was $371 and in 1927, $409. Expenditure.

VII.—PUBLIC WORKS.*

The total expenditure for the year, under all heads, was $24,818,165, a decrease of $6,579,352 as compared with the expenditure in 1928. The percentage of expenditure to authorised provision was 87 for 1929 as against 84 for the previous year. General expenditure.

A total number of 1,156 items was authorised under "Special Services" all of which were put in hand by the end of the year. Work and expenditure were evenly distributed throughout each month.

The total cost of administration was $2,369,974 or 9.6 per cent., on the total expenditure. The total expenditure under Annually Recurrent amounted to $8,844,050.

The annual maintenance of Works and Buildings cost $1,251,558 representing 1.81 per cent. of the value of the buildings as against 2.72 in the previous year. Buildings.

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* Roads are dealt with under Part V.

One thousand ninety-eight new buildings were erected during the year, including 60 quarters for senior officers and 280 for subordinates.

All Government buildings have been classified and revalued and a uniform rate adopted on a percentage basis to cover the cost of upkeep. The total number of buildings existing at the beginning of the year was 11,862 valued at $62,972,139.

Buildings completed during the year include New Office for Chinese Protectorate and Hostel for Students.

Research Institute and Quarters for Forest Economist and Clerks at Kepong.

Central Decrepit Camp, Sungei Buloh.

Leper Asylum, Sungei Buloh.

New Victoria Institution.

New English School at Kajang.

Malay Vernacular School, Tanjong Malim.

Trade School, Ipoh.

Police Stations at Tanjong Malim and Slim.

Pahang Resident's Bungalow at Fraser's Hill.

Rest-House, Raub.

English School, Kuala Lipis.

Operating Theatre, Ipoh.

Improvement and main-tenance of rivers.

Five dredgers built by Messrs. Fleming and Ferguson under a contract with the Crown Agents were delivered in the early part of the year. One dipper dredger and one cutter suction dredger were re-erected and launched on the Klang River at Bungsar, Kuala Lumpur, and one dipper dredger, one cutter suction dredger and one suction dredger were re-erected and launched at Kuala Pari, Ipoh.

Waterworks.

Kinta Water Supply.—Good progress was made on the new water-supply for Kinta district. The service reservoirs at Tambun, Chemor, Batu Gajah and Tronoh were completed and will be taken over from the contractors after satisfactory tests for water-tightness. The total length of mains laid was 38¾ miles, comprising pipes from 30″ down to 6″ in diameter. The service main to Ipoh has been laid and approximately two-thirds of the main pipe line, south of Ipoh. The construction of the sedimentation tank and intake dam and the erection of the filtration plant were almost completed. This is the largest public work ever undertaken by the department.

Teluk Anson Water Supply.—Additions were made to the plant at Changkat Jong, a Jewell filter, a 50 h.p. Diesel engine and a two-stage 3″ centrifugal pump being installed, together with a new rising main.

Work was also started on a new 18″ supply main to Teluk Anson town, a total length of 12,042 lineal feet being laid by the end of the year.

Krian.—The clearing of the Bukit Merah Irrigation Reservoir was completed during the year.

Extension to the Kuala Lumpur Water Supply.—The expenditure on this service to 31st December was $2,025,105. The work was sufficiently far advanced to allow of the new supply being brought into use in October, but many small subsidiary works have yet to be carried out.

Replacement of Water Mains.—Considerable improvements to the town reticulation were carried out, a length of nearly 17 miles of pipe line ranging from 15″ down to 4″ in diameter having been laid.

The capital cost of all waterworks excluding new works under construction is $14,740,301, the cost of maintenance for the year being $234,235 and the revenue $791,974.

Prices and labour.

Prices showed a downward tendency, competition was much keener than in previous years, and there was no shortage of labour.

ELECTRICAL SUPPLY.

General.

The year 1929 is the third year of working of the Electrical Department as an independent Federal department. The remarkable development recorded in the last Annual Report has been maintained.

Statistics.

The total capacity of plant installed for the generation of electricity was 75,426 kilowatts compared with 65,162 kilowatts in 1928, 42,445 kilowatts in 1927 and 29,477 kilowatts in 1926.

The total number of units generated by the above plant in 1929 was 198,761,828. Of these units, 28,008,729 were generated by Government undertakings, the remainder of 170,753,099 units representing private undertakings. The corresponding figures for 1928 were Government undertakings 17,550,067 units and private undertakings 112,419,610 units, making a total of 129,969,677 units.

It will thus be seen that Government undertakings increased their outputs over the 1928 figures by 60 per cent., while private undertakings increased by 51 per cent.

Units produced by plants under 100 kilowatts capacity have not been included in the above figures.

The units generated for various purposes in the different States were as follows:

State.	Tin mining.	Gold mining.	Coal.	Government.	Total.
Perak	125,054,000	...	...	2,591,928	127,645,928
Selangor... ...	33,222,934	...	2,530,000	24,282,497	60,035,431
Negri Sembilan...	...	...	...	1,035,863	1,035,863
Pahang	7,168,253	2,777,912	...	98,441	10,044,606
Total 1929 ...	165,445,187	2,777,912	2,530,000	28,008,729	198,761,828
„ 1928 ..	106,477,525	2,442,085	3,500,000	17,550,067	129,969,677

The units generated by prime movers of various types were as follows:

	Perak.	Selangor.	Negri Sembilan.	Pahang.	Total.
Water wheels ...	31,775,000	1,751,385	...	4,524,702	38,051,087
Steam plant ...	70,950,000	41,855,886	...	3,267,747	116,073,633
Internal combustion engines	24,920,928	16,428,160	1,035,863	2,252,157	44,637,108
	127,645,928	60,035,431	1,035,863	10,044,606	198,761,828

The employment of plant subject to the Electricity Enactment in kilowatts was as follows:

State.	Mining.	Agricultural.	General.	Government.	Total.
Perak	25,075	245	18,633	1,502	45,455
Selangor	12,754	90	209	9,694	22,747
Negri Sembilan ...	8	54	105	872	1,040
Pahang	5,610	130	294	150	6,184
Total 1929... ...	43,447	519	19,241	12,218	75,426
„ 1928... ...	39,742	458	12,988	11,974	65,162
„ 1927... ...	30,536	385	551	10,973	42,445

Technical instruction.

During the year a definite scheme for technical instruction for the Technical Subordinates was put into operation. Classes were held in Kuala Lumpur, Ipoh, Seremban and Taiping. The progress of students has been generally satisfactory, but lack of school training in elementary science has proved a great handicap to many attending the classes.

Accidents.

Seven accidents were reported and investigated during the year, of which six were fatal. Four enquiries were held following the District Inspector's reports on the causes of the accidents.

VIII.—PUBLIC HEALTH.

VITAL STATISTICS.

Population.

The last census was taken in 1921. The figures shown for the present year are estimated at a rate of increase deduced from previous records. Since immigration and emigration of labourers and their dependants have not been completely tabulated, yet are important and very variable factors in population variation, the estimates of population can only be considered as a rough approximation to the correct figures.

The total population of the country during 1929 was estimated to be:

Perak	685,680
Selangor	489.262
Negri Sembilan	218.826
Pahang	168,633
Total ...	1,562,401

The composition by races, calculated on the basis of the census year was estimated to be:

States.	English and Americans.	Eurasians.	Malays and other natives of the Archipelago.	Chinese.	Indians.	Others.
Perak	2,586	1,081	272.206	230,675	177,170	1.962
Selangor	3,390	1,877	113,925	187,005	180,790	2.275
Negri Sembilan ...	1,299	564	84,168	85,242	46,371	1,182
Pahang	394	142	114,756	42,203	10,409	729
TOTAL ...	7,669	3,664	585,055	545,125	414,740	6,148

Births.

Fifty-four thousand one hundred and seventy-two births were registered during the year, giving a birth-rate of 34.67 per mille of population, as against 52,771 births and a birth rate of 34.41 in 1928.

The following table shows the number of births and birth-rates according to races:

Race.	No. of births.		Birth-rate.
Europeans and Americans ...	144	...	18.78
Eurasians	126	...	34.39
Malays and other races of the Archipelago	20,203	...	34.53
Chinese	21,106	...	38.72
Indians	12,483	...	30.10
Others	110	...	17.89

Deaths.

Forty-one thousand two hundred and three deaths were registered, giving a death-rate of 26.37 per mille. The number of deaths in 1928 was 45,437 and the rate 29.63.

The distribution of deaths among the several races was as follows:

Race.	No. of deaths.		Death-rate.
Europeans and Americans ...	42	...	5.48
Eurasians	45	...	12.28
Malays and other races of the Archipelago	13,009	...	22.24
Chinese	16,575	...	30.40
Indians	11,450	...	27.61
Others	82	...	13.34

The following table shows the number of deaths registered as due to certain diseases in the four States in 1929, with estimated death-rates for 1928 and 1929:

State.	Malaria including "fever".			Dysentery and diarrhoea.			Pulmonary tuberculosis.		
	Deaths.	Rate.		Deaths.	Rate.		Deaths.	Rate.	
		1928.	1929.		1928.	1929.		1928.	1929.
Perak ...	8,103	12.50	11.82	751	1.31	1.09	861	1.33	1.25
Selangor ..	4,368	10.52	8.92	1,019	2.47	2.08	807	1.43	1.65
N. Sembilan...	2,292	13.78	10.46	302	2.42	1.38	311	1.31	1.42
Pahang ...	2,205	21.90	13.07	122	1.91	0.72	101	0.67	0.59
Total ...	16,968	13.08	10.86	2,194	1.89	1.40	2,080	1.29	1.33

Infant mortality.

The number of reported deaths of children under one year of age was 9,618, an infantile mortality rate per thousand births of 177.55, against a mortality rate of 182.11 in 1928. The deaths reported from the four States were as follows:

State.	Deaths of children under one year.		Death-rate per 1,000 births. 1928.		1929.
Perak	3,672	...	161	...	155
Selangor ...	3,333	...	169	...	179
Negri Sembilan	1,366	...	211	...	202
Pahang ...	1,435	...	279	...	245
Total ...	9,610	...	182	...	178

PUBLIC HEALTH.

General remarks.

The state of the public health, as reflected in the statistics, was comparatively good throughout the year.

The death-rate, calculated on the estimated total population, was 26.37 per mille. This is a lower rate than that estimated for either of the three preceding years, when the figures were 29.22, 32.11 and 29.63. It is, however, higher than the estimated rate for the years 1922 to 1925: the figure for 1925 was 23.60.

The birth-rate, calculated on the estimated total population, was 34.67: this is the highest yet recorded for the country. The estimated birth-rate has been rising steadily year by year, and now shows a remarkable increase over the figure of 19.41 recorded for the year 1911. The average birth-rate for the period 1925 to 1929 is 25 per cent. above the corresponding figure for the period 1915-1919, while the average rate for the last two years, 1928 and 1929, [illegible] 35 per cent. above that figure.

Until the year 1922 the number of deaths recorded in the Federated Malay States exceeded the number of births: in the year 1911 it was more than double, as also in 1918, the year of the influenza epidemic. In 1923 births for the first time exceeded deaths, and with the exception of 1927, when the balance was again on the wrong side, they have since been annually in excess. In 1919 there were 6,320 more deaths than births recorded: in 1929 there were 12,969 more births than deaths.

In the Malay population, the number of births was lower than in the previous year; the estimated birth-rate is lower than any recorded during the last ten years. The death-rate in the Malay population is the lowest on record, 22.21 per mille of the estimated population.

In the Chinese population the number of births and the birth-rate are the highest on record. The number of Chinese births exceeded the number of Malay births for the first time. The Chinese births and the estimated birth-rate for 1929 were both considerably more than double the figures for 1923.

The death-rate among the Chinese was 30.40, as calculated on the estimated population. It was thus the highest of any race.

In the Indian population the number of births exceeded the number of deaths: records of all previous years show an excess of deaths over births, with the exception of the years 1924 and 1925 when the figures were approximately equal.

The death-rate among Indians was 27.61. For the years 1923, 1924 and 1925 a lower rate was recorded, but with the exception of these years the rate for 1929 is the lowest on record, being more than 6 per mille less than 1928, and nearly 10 per mille less than 1927.

Of these races, Malay, Chinese and Indian, estimated as numbering about 585,000, 545,000 and 415,000, respectively, the Chinese showed the highest birth-rate and death-rate, the Malay the lowest death-rate and the Indian the lowest birth-rate. Infantile mortality showed an improvement for the country generally, the rate per thousand births being 178, compared with 182 in 1928. It is, however, still high.

During the year there was no general outbreak of epidemic disease.

European population.

The number of cases of malaria admitted to Government hospitals was 277 with two deaths. There were four admissions for tropical typhus, with one death. The number of cases of appendicitis was 51.

The total number of European deaths registered was 42, which on an estimated population of 7,669 is a death-rate of 5.48 per mille.

INCIDENCE OF PARTICULAR DISEASES.

Malaria.

Malaria was less prevalent than in either of the two previous years. Records of admissions to Government hospitals and to estate hospitals, and of deaths registered as due to "Malaria, including fever", all show a great reduction, which in the case of admissions to Government hospitals is nearly 30 per cent. The total number of deaths registered as "Malaria, including fever" was 16,968, compared with over 20,000 in each of the two previous years.

The number of cases of malaria admitted to Government hospitals during the last three years is as under:

Year.	Cases.	Deaths.	Death-rate per cent.
1927	48,927	2,543	5.20
1928	49,553	2,637	5.34
1929	35,306	1,795	5.36

The conclusion from all available figures relating to malaria is that the wave of malaria, which was evident during 1927 and 1928, is now passing, or has passed. There can be no reasonable doubt that the decrease in malarial infection was the factor responsible for the improvement in the general death-rate throughout the country last year.

Dysentery.

The number of deaths registered under the head of "dysentery and diarrhoea" was 2,194, and there were 4,491 admissions to Government hospitals. These figures both show about 25 per cent. decrease on last year's figures.

Smallpox.

Ten cases of smallpox were notified during the year: two were fatal. A small outbreak occurred in and around Kuala Lumpur, the infection having apparently been brought by a passenger on the railway. The energetic measures taken to prevent spread of the disease, by isolation and vaccination, were successful; the staff of the Health Branch is to be congratulated on the way in which each of the scattered cases was tracked down and dealt with.

Cholera and plague.

No case occurred of either cholera or plague.

Tropical typhus.

There was a large increase in the number of cases of tropical typhus reported during the year, from 57 in 1928 to 166 in 1929. There were 11 deaths. Of these cases, four were Europeans. It may be that this increase can be partly explained by the careful search now being made for cases of this disease, but there would seem to be little doubt that its incidence is affected by the increase in oil-palm cultivation. Investigations into the causation of the disease are being continued at the Institute for Medical Research.

Cerebro-spinal meningitis.

An outbreak of cerebro-spinal meningitis occurred amongst Indian immigrants at Port Swettenham Quarantine Camp; there were 44 cases, of which no less than 38 were fatal, an extremely high rate of mortality. The disease did not appear anywhere else in the country in epidemic form, only a few scattered cases being reported.

Pneumonia.

Pneumonia continues to be one of the deadliest of the killing diseases of the country. The number of admissions to hospital, 3,227, was less than last year, and the case mortality was not quite so high, though it was still over 45 per cent.

Pulmonary tuberculosis.

The number of deaths registered as due to pulmonary tuberculosis was 2,080, which is very near the figure of 2,000 mentioned last year as being the average for recent years. The number of cases admitted to Government hospitals was 2,112, and the deaths in hospital were 1,078; deaths in the previous year numbered 1,074. There is therefore nothing in the recorded figures to indicate any rapid increase in the disease, though not much satisfaction can be derived from this, since what is wanted is an annual decrease.

Leprosy.

Two hundred and fifty-one new cases of leprosy were admitted for detention during the year. The average of annual admissions during recent years has been 254, previous reports having over-estimated the numbers. At the end of the year there were 1,055 lepers under detention, of which 983 were in the Leper Settlement at Kuala Lumpur: 800 of these were Chinese.

The new settlement at Sungei Buloh was not completed by the end of the year, but it should be ready during 1930. The existing settlement is unsuitable and over-crowded, and there is no provision for separation of non-infective lepers, so that the release of such cases has not been practicable. Indefinite detention of all known lepers encourages the concealment of early cases of leprosy in the general population; one of the best chances of treating and preventing the disease is therefore being lost.

Yaws.

The treatment of yaws by arsenical compounds was continued, and 25,862 injections were given. The number of cases treated in each State, in comparison with the numbers treated in 1925, 1926, 1927 and 1928, is shown in the following table:

State.	1925.	1926.	1927.	1928.	1929.
Perak	9,155	9,358	2,307	10,007	8,845
Selangor	1,305	1,680	2,504	1,999	1,458
Negri Sembilan ..	6,426	4,543	4,465	4,280	3,721
Pahang	9,403	7,893	3,913	3,286	2,421
Total ...	26,289	23,474	13,189	19,572	16,445

Venereal diseases.

There was a further increase in the number of cases of venereal disease which received treatment at hospitals and clinics, the total number recorded being 40,802 as compared with 35,366 during the preceding year. It is hoped that this increase is due to a greater readiness to make use of the free treatment provided, rather than to an actual increase in disease.

Propaganda by means of illustrated lectures was continued, and educational pamphlets in five languages were widely distributed among all races.

The number of centres at which free treatment is provided is 59.

Beri-beri.

The number of cases treated of beri-beri in hospitals was 1,640 with 197 deaths, as compared with 2,098 cases with 239 deaths in 1928. The total number of deaths registered as due to beri-beri throughout the country was 636. There is thus evidence of a further satisfactory decrease in the incidence of this disease, after the comparatively heavy incidence which followed the 1926-7 floods. The pity is that a disease so easily preventable should be present at all. The remedy lies in education in the elementary principles of nutrition.

Cancer.

The number of cases admitted and treated in hospitals under the heading of "cancer or other malignant tumours" was 315, with 136 deaths. These figures are practically the same as those reported for the previous year.

INFANT WELFARE WORK.

Expansion of work.

This important branch of work continued to extend. No new centres were opened, but the work at existing centres greatly increased.

The number of attendances at Infant Welfare Centres throughout the country for each of the last four years is shown hereunder:

1926.	1927.	1928.	1929.
61,365	92,476	118,257	150,239

Nature of work.

Work at these centres is not strictly confined to infant welfare; a large part is devoted to expectant mothers, while it is impossible to avoid ordinary out-patient treatment for minor ailments of women and children. Since such work is successful in gaining the confidence of the mothers, it is all to the good.

General.

The number of visits made by European Sisters or other Health Visitors to women and children in their homes during the year was recorded as 116,019, of which over 31,468 were made by European Sisters. The total number of visits in the preceding year was recorded as 71,631. There has thus been a great increase in this valuable service.

As a factor in the improvement in the public health of the country the Infant Welfare Centres are playing a great part, and the declining infantile mortality rate may be taken as an indication of this.

INSPECTION OF SCHOOLS.

Scope of work. A second Lady Medical Inspector was appointed during the year, for work in Perak, and the work in Selangor and Negri Sembilan was continued by the Lady Inspector appointed in 1928. One hundred and twenty-nine schools were visited, and 11,514 children examined.

Dental treatment. During the year a Dental Surgeon was appointed for inspection and treatment of school children. In six months 2,532 children were examined, and 944 treated. It was found that nearly 75 per cent. of the children needed attention. The Dental Surgeon reports that the condition disclosed is deplorable, and that a great deal of the existing dental caries could have been prevented by correct habits of diet and cleansing of the teeth.

PUBLIC HEALTH EDUCATION.

General. Propaganda by means of lectures and pamphlets has been continued. Health exhibits were staged at three Agricultural Shows during the year. Reported cases of tuberculosis are being traced to their homes, and the households instructed in precautionary measures.

Work has been started on the systematic preparation of cinematograph films, and it is hoped eventually to obtain a series of films, each dealing with some particular aspect of disease prevention, and all dealing, in the form of a story, with typical Malayan conditions.

QUARANTINE AND PORT HEALTH WORK.

Infected ships. A great part of the immigration into Malaya is through the ports of Singapore and Penang, both in the Straits Settlements. The Medical Department of the Federated Malay States is chiefly concerned with Port Swettenham, which admits large numbers of Indian labourers. Of forty-nine ships bringing Indian immigrants to this port during the year, six were infected, four with cerebro-spinal meningitis and two with smallpox.

Immigrants quarantined. The total number of immigrants dealt with at the quarantine camp at Port Swettenham was 60,761.

Medical Institutions.

Institutions.

Institutions under the control of the Medical Department, on 31st December, 1929, were as follows:

4 European Hospitals;
34 District Hospitals (each with Out-patient Dispensary);
3 Women's Hospitals;
2 Leper Asylums;
5 Gaol Hospitals;
1 Quarantine Camp with Hospital (at Port Swettenham);
4 Vagrant or Decrepit Wards;
Central Mental Hospital;
Institute for Medical Research;
30 Town Dispensaries;
5 Infant Welfare Centres;
5 Special Clinics for Venereal Disease.

Hospital in-patients.

The number of in-patients treated in Government hospitals was 117,639 with 9,764 deaths; corresponding numbers for the previous year were 143,361 and 11,329. The number of major surgical operations performed was 1,671, compared with 1,463 in 1928.

Dispensaries and out-patients.

The number of out-patients treated in all hospitals, dispensaries, travelling dispensaries and dispensary boats in 1929 was 878,158 as compared with 895,948 in 1928.

Mental diseases

On 31st December, 1929, there were 1,785 male and 559 female patients at the Central Mental Hospital. The total admissions during the year were 983, while the discharges numbered 566. Two new wards were opened at the beginning of the year, and a ward for infectious female cases is under construction.

Institute for Medical Research.

A full programme of research work was undertaken. Investigations in malaria included study of the conditions which may influence the infectivity of human subjects, especially with regard to the effect of treatment with quinine. Field and laboratory experiments in the breeding and life history of mosquitoes were continued. Further investigations into the aetiology of tropical typhus in Malaya were carried out by the Research Student specially appointed for this purpose. Other research included leprosy, leptospirosis, anaemia of pregnancy, and pneumonia.

By the end of the year arrangements were nearly completed for the preparation and supply of vaccine lymph, and it is expected that in 1930 the Institute will be able to provide all the lymph required for smallpox vaccination in Malaya.

The preparation of vaccine for prophylaxis and treatment of rabies was continued, though the administration of the vaccine was transferred from the Institute to certain selected hospitals. The number of patients treated was 203.

The Institute also dealt with a great volume of routine bacteriological and pathological work.

IX.—EDUCATION.

Financial.

The expenditure upon Education (including $852,370 spent by the Public Works Department on the building and upkeep of schools) was $4,320,961. Of this sum, $524,059 was paid in grants to English aided schools and $73,641 in grants to Chinese vernacular schools.

The total revenue, derived mainly from school-fees, collected by the department was $166,645. In addition the Education Rate realised $75,340.

Staff.

Four European Masters and four mistresses were recruited for the Federated Malay States. One European Mistress resigned.

At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 48 and the female 12. This included administrative and teaching staff. There are still vacancies to be filled to allow for the increasing number of schools and of officers lent to the Unfederated Malay States and for officers on leave.

Higher education.

One of the highest local educational institutions open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore.

The other is Raffles College, which provides a higher education in subjects other than medicine. The College opened informally in June, 1928. In 1928, the Federal Government agreed to defray the cost of another hall of residence for students from the Federated Malay States and the building was completed early in 1930. There were 36 such students at the College at the end of 1929.

The Malay College, Kuala Kangsar, trains probationers for the Government service.

A start was made with the building of a School of Agriculture at Serdang, with a view to providing practical and scientific courses in agriculture. Quarters for the school staff were in course of erection at the latter end of the year and the building of the school and a hostel for 80 students was begun in January, 1930.

Evening classes.

Evening classes continued to be held in all the States. In Perak and Negri Sembilan again the only classes in demand were those for elementary English. In Kuala Lumpur the curriculum comprised English, shorthand, book-keeping, type-writing, mathematics machine drawing, electricity, locomotive and electrical engineering, workshop mechanics, surveying, art and Malay. Attendance on the whole was fair. In Pahang there were classes in English and typewriting.

There were Normal Classes for teachers in all the States except Pahang, where correspondence classes take their place. A new scheme for the improvement of the normal class syllabus was approved by the Government during the year. The old scheme supplied only one course of training for all, whereas specialisation had made it imperative to differentiate between courses for primary and courses for elementary teachers. This need is met by the new scheme, which came into force on 1st April, 1929.

Scholarships and free education.

Of the 17,377 pupils in English schools, 445 held Government scholarships, enjoying free education, board and lodging; 30 held other scholarships; 2,662 received free education from the Government and 244 free education from other sources. Thus 3,381 or 19.46 per cent. receive a free education.

All pupils in Malay vernacular schools enjoy free education.

English schools.

There were 23 English Government schools for boys, 13 English grant-in-aid schools for boys and 13 for girls. The total average enrolment was 6,683, 6,464 and 4,230 respectively.

Malay College, Kuala Kangsar.

The expenditure on the Malay College, Kuala Kangsar, was $94,193. At the end of the year there were 133 students, all boarders, educated and maintained entirely at Government expense. Two boys suffering from consumption were sent away from the school, but otherwise the general health of the boys was good. Cricket, hockey and association football are played regularly. There were 51 Cadets and 69 Scouts. The Cadet Corps received a good report at its annual inspection.

Sultan Idris Training College.

At the beginning of the year there were 366 students and one probationer in residence at the Sultan Idris Training College for the training of Malay vernacular teachers. After the fasting month 124 students completed their course and left and 131 new students joined.

The total expenditure was $154,977, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. The cost of educating a student was $384 a year.

The curriculum comprises the Malay language and literature, Malay history, geography, the theory and practice of teaching, hygiene, practical training, rural science, handiwork and religious instruction.

The strength of the four College platoons in the Malayan Volunteer Infantry was 202. All attended Camp at Port Dickson during July and were favourably reported upon.

Malay vernacular education.

The Malay vernacular schools are all Government institutions and provide free education. There are 431 schools for boys and 77 for girls with average enrolments of 32,876 and 4,580 respectively. The Malay teaching staff numbers 1,543.

Malay parents continue to display a most satisfactory eagerness for the education of their girls, a change due largely to the improved practical methods of teaching introduced by the Lady Supervisor of Malay Girls' Schools.

Tamil vernacular schools.

There are 339 Tamil vernacular schools with an average enrolment of 12,416. Estates continued to build and equip new schools. During the year regulations for the organisation and administration of all Tamil schools were printed and issued.

Chinese vernacular schools.

Three hundred and seventy-nine Chinese schools were registered with 902 teachers and 23,393 pupils, of whom 5,357 were girls. Grants were paid to 82 schools.

Sanitary inspection is now a routine preliminary to the registration of all new schools.

The training class for Chinese teachers was continued at Kuala Lumpur. There were 12 students in three classes.

There are two Government Chinese schools of primary standard at Kuala Lumpur. One was opened in 1929.

Technical education.

The Trade School at Kuala Lumpur trains youths to become general fitters and motor mechanics. There were 64 students. Twenty students completed the three-year course of training and all found employment either in the Government service or with private firms. The school has been enlarged and now has accommodation for about 100 students. The practical aptitude of the Malay students is most gratifying.

A Trade School at Bagan Serai trains students in carpentry and furniture-making. The average enrolment was 58. The first school leaving examination was held in October and 21 candidates passed out. All have since found work. Exhibits of the work done at the school were shown at the Taiping Agri-Horticultural Show in August.

A Trade School at Ipoh was completed and was in course of being equipped at the end of the year.

X.—LANDS AND SURVEY (INCLUDING GEOLOGY).

Area under title.

The area in private occupation at the end of the year amounted to about 2,615,126 acres under agricultural titles and 209,734 acres under mining titles.

It is estimated that of the 27,500 sq. miles covered by the four States of the Federation, 16.1 per cent. is land in private occupation, 22.8 per cent. is reserved forest, while the balance of 61.1 per cent. is still State land, including therein land reserved for purposes other than forests.

Land revenue.

The land revenue (including $2,230,446 derived from Land Sales) amounted to $7,760,102 as compared with $7,573,295 (including $2,317,044 derived from Land Sales) collected in 1928.

SURVEYS.

Financial results.

The cost of the department may be summarised as follows:

Year.	Gross expenditure.	Reimbursements and revenues.	Net expenditure.
1929 ...	... $1,903,567 ...	$674,501 ...	$1,229,066
1928 ...	... 1,869,564 ...	687,242 ...	1,182,322
1927 ...	... 1,708,259 ...	653,881 ...	1,054,378

Before 1929 payment was received for topographical surveys of forest reserves. Had this practice been followed last year the net expenditure would have been $1,179,066, showing a small reduction over that of 1928.

Revenue Survey Branch.

The main financial data of the last few years are given in the table below:

Year.		Expenditure.		Fees earned at schedule rates.		Actual revenue.		Net cost.
1929	...	$913,507	...	$499,013	...	$423,352	...	$490,155
1928	...	903,842	...	462,877	...	392,896	..	510,946
1927	...	870,389	...	526,754	...	368,580	...	501,809
1926	...	820.561	...	405,000	...	292,906	...	527,655

This table does not show separately the cost of work carried out for other departments without charge, which amounted to $157,949, nor the part remission of fees by Collectors of Land Revenue which totalled $54,846.

The net cost of this branch in 1923 was $823,160.

State of surveys with reference to requisitions for survey.

The number of lots for which surveys were requisitioned during the year totalled 16,455 against 15,101 in 1928. The number of lots surveyed totalled 14,257 while requisitions for 11,499 lots were satisfied. The arrears represent rather more than a year's work, but since they consist almost entirely of surveys of native holdings already occupied, they occasion little inconvenience to the public.

Topographical Branch.

Surveys for the standard topographical map of Malaya, scale one inch to one mile, were continued in Kedah, Pahang, Selangor and Eastern Negri Sembilan. Experiments to test new methods affecting the organisation, control and management of field parties and the treatment of information obtained by traversing were carried out and indicate that in jungle country their general application will result in more accurate maps at lower costs.

Surveys of forest reserves, scale four inches to one mile, were proceeded with and further areas in Kuala Lumpur and Ipoh were surveyed on large scales for town planning and engineering purposes.

Map production.

An increase in the volume of work completed by the Central Drawing Office and the Photo Lithographic Branch which, together, are responsible for the reproduction of the very wide range of maps available was reflected by an increase of twenty per cent. in the revenue derived, $75,915.

The principal productions were additional sheets of the standard topographical map of Malaya, scale one inch equals one mile, a geological map of Malaya, a new edition of the Perak State map and large scale town maps and sheets.

Topographical maps on the standard scale now cover approximately 40 per cent. of the Federated Malay States and cadastral sheets on scales of four or eight chains and thirty-two chains to an inch are available for virtually the whole of the area alienated.

Meteorology.

Steady progress was made by the Meteorological Branch of the department. Of the Malayan programme of seventeen second order stations, fourteen were fully established by September. Difficulties were experienced in obtaining suitable sites for the remainder but these have now been overcome. Daily weather reports have been supplied to the Press and the various port authorities since July. By the end of the year these reports comprised the tabulated observations received from fifteen stations.

General.

The year has been one of satisfactory progress. In the last report the Surveyor-General stated that the general standard of efficiency had reached a level beyond which progress must necessarily be slow, and it is gratifying to find that the ratio of increased efficiency has been greater than was anticipated.

GEOLOGY.

The first geological survey of Malaya was completed except for certain areas where the prospect of obtaining valuable results was not sufficient to justify the expense and time involved. A draft geological map on the scale of 12 miles to an inch, based on the Survey Department's map of that scale, was prepared and will be published. As a result of the survey it does not seem at all probable that any large new tin-fields will be discovered, and it appears that a high output of tin-ore in the future will depend on dredging low-lying alluvial areas with dredges which can make a profit out of ground carrying only a fraction of a *kati* per cubic yard. The Director has now been able to confer twice with the staff of the Geological Survey of the Netherlands Indies and it was found that results in either area agree closely and that the staffs are working on parallel lines.

XI.—LABOUR.

General.

The majority of labourers in the Federated Malay States are Chinese and Southern Indians. The latter are chiefly engaged in agricultural work and on public services: the former in agriculture and every other form of manual labour. Skilled work is almost entirely in the hands of the Chinese.

In addition there are 6,642 Javanese labourers, immigrants from the Netherlands East Indies. This class of labour is recruited mainly for the Kuala Lipis and Kuantan districts of Pahang. Five hundred and eight of these labourers are employed on contracts of service for 900 days' work entered into in Java. This is the only form of indentured labour in the Federated Malay States. All other labourers of all races are at liberty to leave their employment at any time on giving a month's notice.

Conditions of labour are governed by the provisions of the Labour Code, 1923, and by the Netherlands Indian Labourers' Protection Enactment, 1927. These Enactments are administered by a Labour Department under the direction of the Controller of Labour, Malaya. Officers of the Chinese Protectorate are appointed Deputy or Assistant Controllers of Labour to deal with questions of Chinese Labour.

Relations between employers and labourers were generally satisfactory.

Wages.

The rates of wages were a little lower than those prevailing in 1928 except in the case of the wages of South Indians which rose throughout the country in 1929 following on the increase in the prescribed rates for South Indian labourers in the Coast districts of Selangor. These rates, 50 cents a day for males, 40 cents a day for females and 20 cents a day for minors, came into effect from 1st of February, 1929. With the exception of the inland districts of Pahang where prescribed standard rates of 58 cents a day for men and 46 cents a day for women are being paid, men and women in the Federated Malay States are now paid on practically all places of employment at rates not less than 50 cents and 40 cents a day respectively.

Population.

The estate population for the past five years is shewn in the following table:

—	1925.	1926.	1927	1928.	1929.		Total.
					Males.	Females.	
Indians (Madras Presidency) ...	137,761	176,114	172,466	162.460	119,930	61,275	181,205
Chinese ...	37,879	61,064	44.239	50,647	59,973	5,644	65,617
Javanese ...	4,165	4.760	4,550	5,149	4,031	1,285	5,316
Others ...	4,549	4,822	3,963	4.788	5,907	735	6,642
Total ...	184,354	246,760	225,218	223,044	189,841	68,939	258,780

Health conditions on estates generally show an improvement on those of 1928. The death-rate among Indian labourers on estates and mines from which returns are received was 12.58 per mille on an average population of 168,025 as compared with 15.71 on an average population of 170,824 in 1928, 18.44 per mille in 1927, 15.62 in 1926, and 12.55 in 1925. **Health.**

The mortality among labourers of other races, of whom there are fewer employed on estates was 6.20 per mille. The death-rate per mille amongst labourers of all races on estates was 10.69 and amongst Indian labourers 12.81.

Under the Health Boards Enactment (that now in force is Enactment No. 32 of 1929) a Central Health Board has been constituted which is empowered to collect an annual cess or cesses for the purpose of carrying out health measures in areas other than Sanitary Board areas, and Local Boards under the control of the Central Health Board have been formed in all States. The Local Board areas correspond generally with those of administrative districts and the District Officers are Chairmen of the Local Boards. In order to co-ordinate the work of the Boards with the Labour Code the Controller of Labour is appointed ex-officio President of the Central Health Board. Considerable progress has been made in organising uniformity of service by private medical practitioners on estates throughout the Federation, and hospitals are being provided or extended to ensure medical treatment of labourers in need of it in accordance with the requirements of "The Labour Code, 1923," and "The Health Boards Enactment, 1929". Investigation into schemes (chiefly anti-malarial) for the prevention of disease is now being made by Local Health Boards. **Health Boards.**

"The Health Boards Enactment of 1928" was repealed and replaced by "The Health Boards Enactment, 1929". No new principles were introduced.

Chinese immigration is uncontrolled and takes place mainly through the ports of the Colony. The number of Chinese deck passengers arriving in the Colony was 293,167 while the number of those returning to China was 139,967. Large numbers of these immigrants proceeded to the Federated Malay States but in spite of this continued influx there was little unemployment. **Chinese immigration.**

The immigration of labourers from Southern India is regulated by the Indian Immigration Committee (of which the Controller of Labour, Malaya, is ex-officio Chairman) appointed by the High Commissioner. **Southern Indian immigration.**

The railway fares in India, steamer passages and transport expenses of such labourers to their places of employment are paid from the Indian Immigration Fund.

The number of labourers so assisted who arrived in Penang during 1929 was 82,183 compared with 27,240 in 1928. These "assisted labourers" consisted of 70,314 adults and 11,869 minors. Of the adults 52,104 were men and 18,210 women: the number that proceeded to places of employment in the Federated Malay States was 56,223 compared with 18,343 in 1928. Immigration from Southern India in 1928 was abnormally low, as great uncertainty existed regarding the consequences of the abolition, in November, 1928, of all restrictions on the export of rubber. Immigration in the year under review was more normal.

Indian Immigration Fund.

The income of the Indian Immigration Fund is derived from a quarterly assessment levied on all employers of South Indian Labour throughout Malaya based on the number of days' work done by such labourers during the quarter.

With a view to increasing the number of female immigrants a differential rate is levied on male and female labourers. The rate of assessment was fixed for the 1st and 2nd quarters at $1 for males and 50 cents for females and for the 3rd and 4th quarters at $2 for males and $1 for females in respect of every 72 days' work done.

Repatriation.

During 1929, 5,323 adult and 1,408 minor decrepit or destitute Indians were assisted with passages back to India. Of these, 2,920 adults and 917 minors were from the Federated Malay States.

Amongst those repatriated at the expense of the Indian Immigration Fund, 745 adults and 354 minors had been inmates of the Home for Decrepit Indians, Kuala Lumpur, maintained by the Immigration Committee.

XII.—MISCELLANEOUS.

Legislation.

The total number of Enactments passed, excluding the Supply Enactments, was 30, as in 1928. Of these, 15 were amending Enactments and eight were re-enactments of already existing provision, while the remainder introduced new matter into the statute book.

The most important new Enactment is probably the Workmen's Compensation Enactment. This was a fairly close copy of the Indian Workmen's Compensation Act, but has not yet been brought into force. Another important statute is the Distribution Enactment laying down rules for the distribution of the estates of persons, not being Mahomedans, who die intestate and domiciled within the Federated Malay States. The rules follow the system in force in the Colony, which consists generally speaking of English law modified by judicial decisions as to the recognition of polygamy. Other new material includes provision for claims for compensation by the family of a person killed in a fatal accident (Lord Campbell's Act), and for the operation within local waters of revenue vessels belonging to the neighbouring Administrations.

The most important re-enactment was the Sanitary Boards Enactment. This is intended to regularise the legal position of a Sanitary Board and to separate the advisory duties of the Board from the administrative functions of a Government department. Much new matter was included, taken from the Municipal Ordinance of the Colony, which was either omitted in the former law or relegated to the by-laws. Other re-enactments included a new Petroleum Enactment, an Aerial Navigation Enactment, following the British Order-in-Council applicable in Crown Colonies, and a Health Boards Enactment. It is hoped that this last will meet the many unforeseen difficulties which, no doubt unavoidably, have occurred in connection with the preliminary work necessary to the launching of schemes. Another important re-enactment is the Estate Duty Enactment, which represents a considerable advance on the former law.

The only amending Enactments of any importance were the amendment to the Civil Procedure Code, introducing Third-Party Procedure and Counterclaims in Supreme Court Suits, and the two amendments to the Railways Enactment. The latter provided better machinery for enquiries into accidents and made certain alterations regarding the liability of the Railway Administration for the loss of passengers luggage.

PLANTERS' LOANS BOARD.

Planters' loans.

On 1st January, 1929, the Board had outstanding as "Planters" loans to four companies ($210,000) and nineteen individuals ($247,200), the sum of $457,200. It lent in new loans (seven) during the year a further $312,000, while nine properties repaid their loans in full amounting to $130,500 and seven other properties made partial repayments to the extent of $46,800. At the end of the year, the "Planters" loans outstanding were $591,900, to six companies ($445,000) and fifteen individuals ($146,900).

Building loans. Building loans at the beginning of the year totalled thirty-nine (thirty-six borrowers) amounting to $895,920. During the course of the year a further twenty-nine loans amounting to $761,000 were approved but of these one ($15,000) was subsequently withdrawn while eight totalling $152,000 had not been taken advantage of by the end of the year. The amount actually lent in new loans, therefore, was $594,000. Repayments in full were made by five borrowers totalling $49.500 while twenty-six others made partial repayments to the extent of $86,380. At the end of the year, the Board had outstanding fifty-one loans (forty-eight borrowers) amounting to $1,354,040.

War Service loans. Under the War Service Land Grant Scheme, at the beginning of the year, eighty-four ex-soldiers were benefiting by approved loans amounting to $2,027,000. Eleven beneficiaries repaid their loans in full amounting to $228,750, partial repayments by five others totalled $26.500 while one loan of $25,000 had to be written off as irrecoverable. The amount outstanding at the end of the year was $1,746,750 due by seventy-two beneficiaries.

Interest. Interest earned during the year amounted to $158,673 of which $23,566 was in respect of "Planters" loans, $48,654 in respect of "building" loans and $86.453 in respect of "War Service" loans.

Interest collected totalled $123,541. Of this sum, $62,694 was credited to Federal Revenue and $60,847 to the revenue of the Board.

Profit and loss. The Board's profit on the year's working amounted to $26,580.

Reserves. The reserves of the Board stand at $600,000.

Capital. The capital of the Board is $4,000,000 created by "The Planters Loans Fund Enactment, 1915".

PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the seventh year of the working of the Department of the Public Trustee.

The duties of the Public Trustee are :

(*a*) to act in the administration of estates of small value;

(*b*) to act as an ordinary trustee;

(*c*) to act as a trustee appointed by the Court.

During the year the Public Trustee accepted 21 trusts in all as compared with 44 in 1928 and 30 in 1927.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at over $4,264,000.

The office of Official Administrator, Federated Malay States, is now combined with that of Public Trustee. The number of estates taken up by the Official Administrator during 1929 was 14, valued at nearly $146,000.

ESTATE DUTY OFFICE.

The year under review was the third year in which this office collected the stamp duty due in respect of all four States on the estates of deceased persons.

The number of affidavits for the Collector which were received during the year was 645 as compared with 839 in 1928. The revenue collected amounted to $339,437 as against $529,937 in 1928.

The Estate Duty Enactment No. 10 of 1929 came into force on 1st October, 1929, and deals with estates of deceased persons who died on or after that date.

VOLUNTEERING.

Strength.

During 1929, a Light Battery of Artillery was formed as part of the Malay States Volunteer Regiment and was recruited up to establishment strength. The strength of the Malay States Volunteer Regiment as a whole has increased by 48. The total strength is now 1,606 with an effective Colour Service strength of 1,033.

Efficiency.

The general efficiency of the Regiment was well maintained. Few men failed to fire their range courses and results were very satisfactory. Field training is difficult to arrange except in camp and the importance of the latter to the tactical efficiency of the Regiment cannot be over emphasised.

Port Dickson Camp.

The number of attendances at Port Dickson Camp was up to expectation and although the actual numbers attending increased, there were 630 volunteers who did not attend camp during the year.

Cost.

Although drill attendances were not less than in previous years the cost per volunteer in Annually Recurrent Expenditure was very considerably reduced.

Malayan Volunteer Infantry.

During the year the Sultan Idris Training College Malayan Volunteer Infantry Company was federalised and made a very good start under the new régime.

Malayan Volunteer Infantry units are well up to establishment strengths.

Attendances at Camps were very good. The majority of officers and men showed an admirable keenness but it is not yet possible to say that the general efficiency of Malayan Volunteer Infantry units is as high as it should be either in field or weapon training. It is hoped to improve the standard by affording greater opportunities for instruction in future.

GENERAL.

His Excellency Sir Hugh Clifford, M.C.S., G.C.M.G., G.B.E., High Commissioner for the Malay States, went on leave prior to retirement on the 20th October, and Mr. John Scott, C.M.G., Officer Administering the Government of the Straits Settlements, held the office of High Commissioner until the end of the year.

Sir Hugh Clifford's departure occasioned general and sincere regret, the Civil Service losing its senior member, the Malays their oldest friend, and the country generally a very able and distinguished administrator who combined a wide experience with a great personal charm.

Sir William Peel, M.C.S., K.B.E., C.M.G., Chief Secretary to Government, was granted leave on the 30th November, and Mr. C. W. H. Cochrane, M.C.S., British Resident of Perak, was appointed to act as Chief Secretary to Government.

Mr. A. F. Worthington, M.C.S., British Resident of Perak, retired in June and was succeeded by Mr. C. W. H. Cochrane, M.C.S.

His Royal Highness the Duke of Gloucester, K.G., as Head of the Garter Mission to Japan, passed through Malaya in April, paying a short visit to Kuala Kangsar where he was entertained by His Highness the Sultan of Perak, and spending one day in Kuala Lumpur where elaborate preparations had been made for his reception. During the afternoon His Royal Highness gave audiences to Their Highnesses the Sultans of Selangor and Pahang and the Yang di Per Tuan Besar of Negri Sembilan. His Royal Highness appeared to be much impressed by the development of the country and to appreciate highly the spontaneous demonstration of loyalty of all sections of the community.

His Majesty the King was graciously pleased to confer the following honours:

On His Majesty's Birthday—

Honorary Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George	His Highness Ala'idin Suleiman Shah ibni Almerhum Raja Muda Musa, Sultan of Selangor.
Commander of the Most Excellent Order of the British Empire (Civil Division)	The Hon'ble Mr. E. W. F. Gilman (when he was Controller of Labour, Malaya).

The Certificate of Honour approved by His Majesty the King as a recognition of the loyal and valuable services rendered to the Government of the Federated Malay States was awarded to the following on the occasion of His Majesty's Birthday:

The Hon'ble Mr. Wong Yick Tong, J.P., M.F.C., M.C.S.;
Dato' Wong Ah Jang, J.P., Dato Stia Bakti;
Sri Jaffar bin Abdul Patah, J.P.;
Mr. Leong Sin Nam, J.P., M.S.C.;
Orang Kaya Kaya Panglima Kinta, Che Wan bin Muhammad Yusuf, J.P., M.S.C.;
Orang Kaya Kaya Dato' Shahbandar, Inche Ahmad bin Muhammad Taib, M.S.C.

C. W. H. COCHRANE,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
2nd June, 1930.

Appendix A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,355	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915

1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715.698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584	84,660,975	201,393,405	349,012.595	67,041	15,424,409	261.352	4.312.922	6.694.598	23,331,618	1,562,401	1929

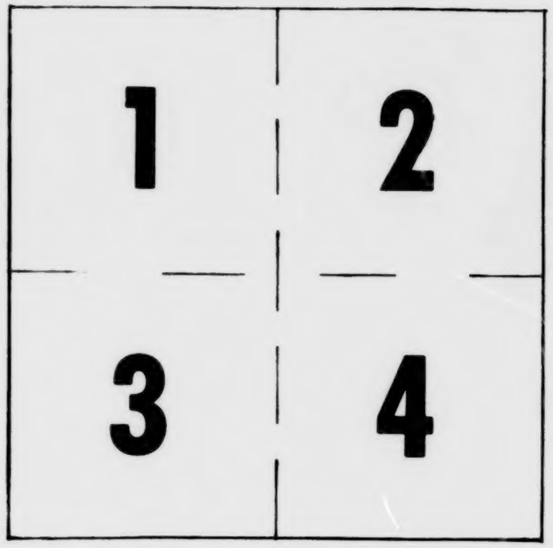
NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.
* As now corrected. ‖ Excluding bullion and specie. † The figures for previous years included items now omitted owing to reclassification of revenue.

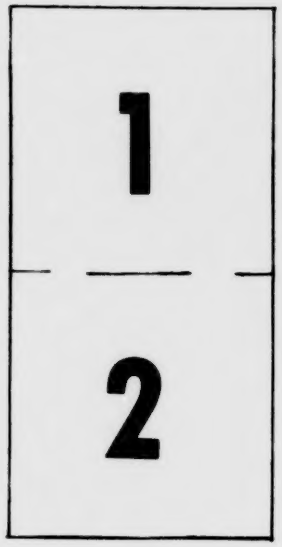
Appendix B.

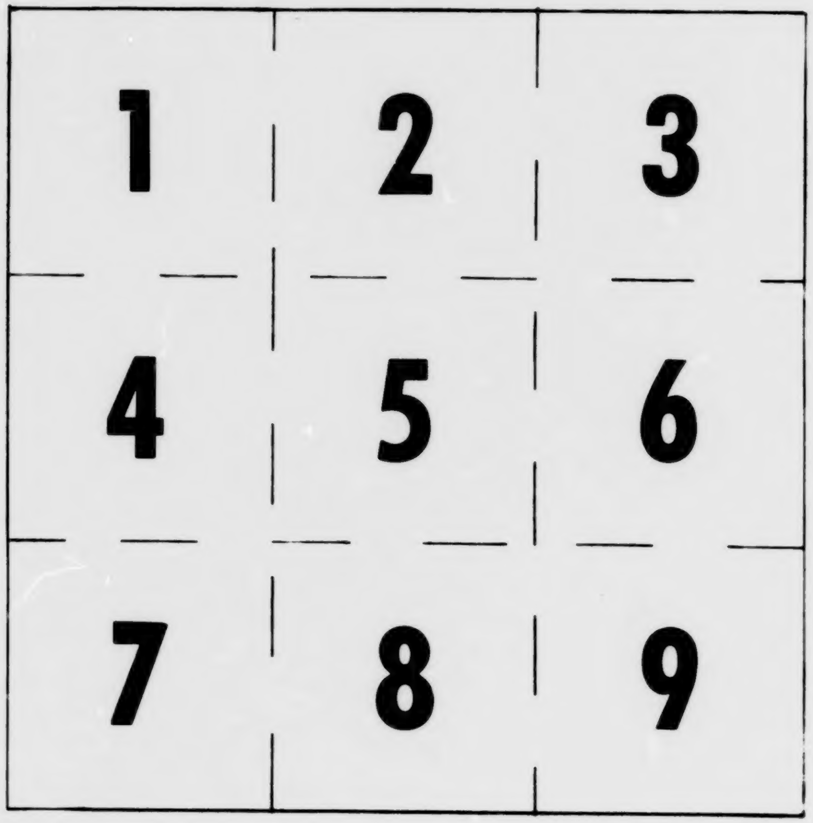
STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1929.

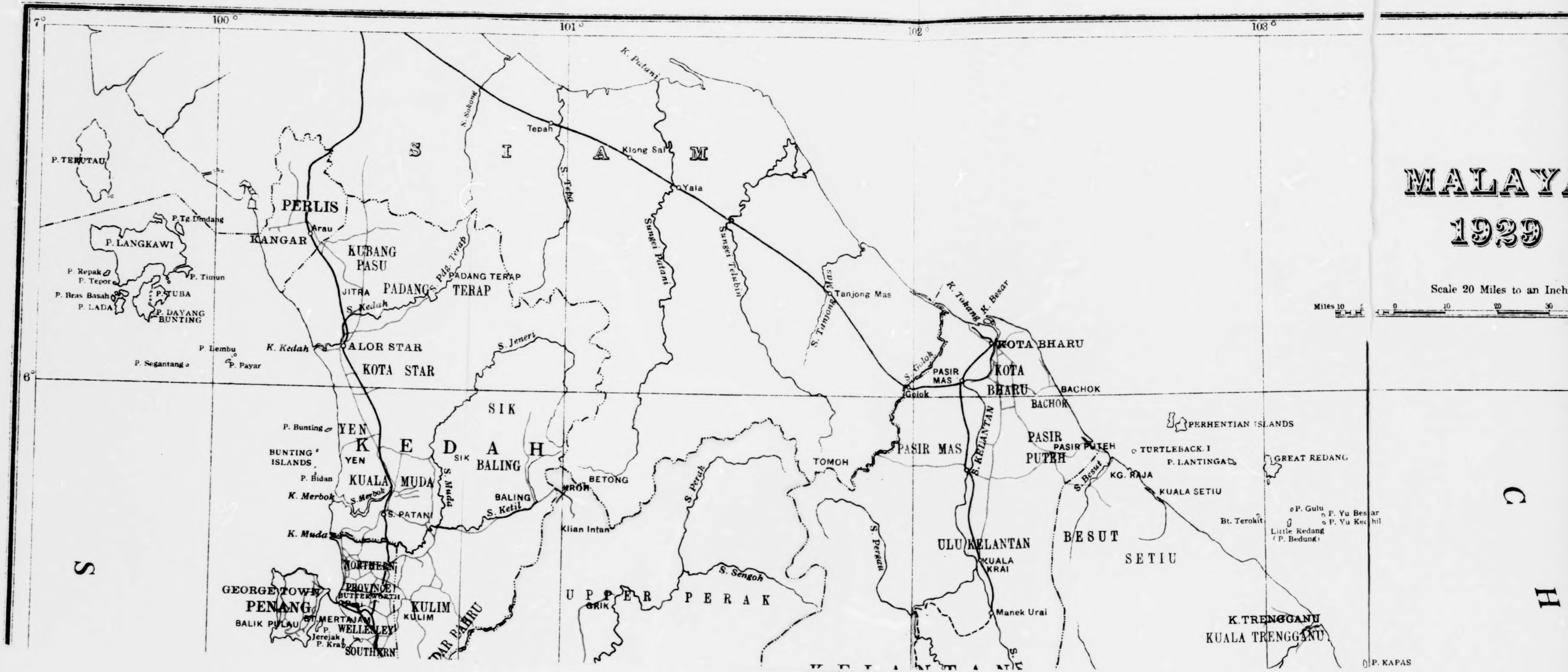
Dr.	$ c.	$ c.	$ c.	*Cr.*	$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921 ...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamp, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamp, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	...	20,367,692 10			
Posts and Telegraphs Department	...	4,004,712 47			
Topographical Survey Department	...	763,362 66			
Topographical Survey of Forest Reserves ...	...	67,063 83			
Railways—Open Lines	...	9,196,237 08			
„ Construction	...	37,989,017 91			
			72,388,086 05		
To Balance ...	...	...	1,909,463 55		
			$80,185,714 29		$80,185,714 29

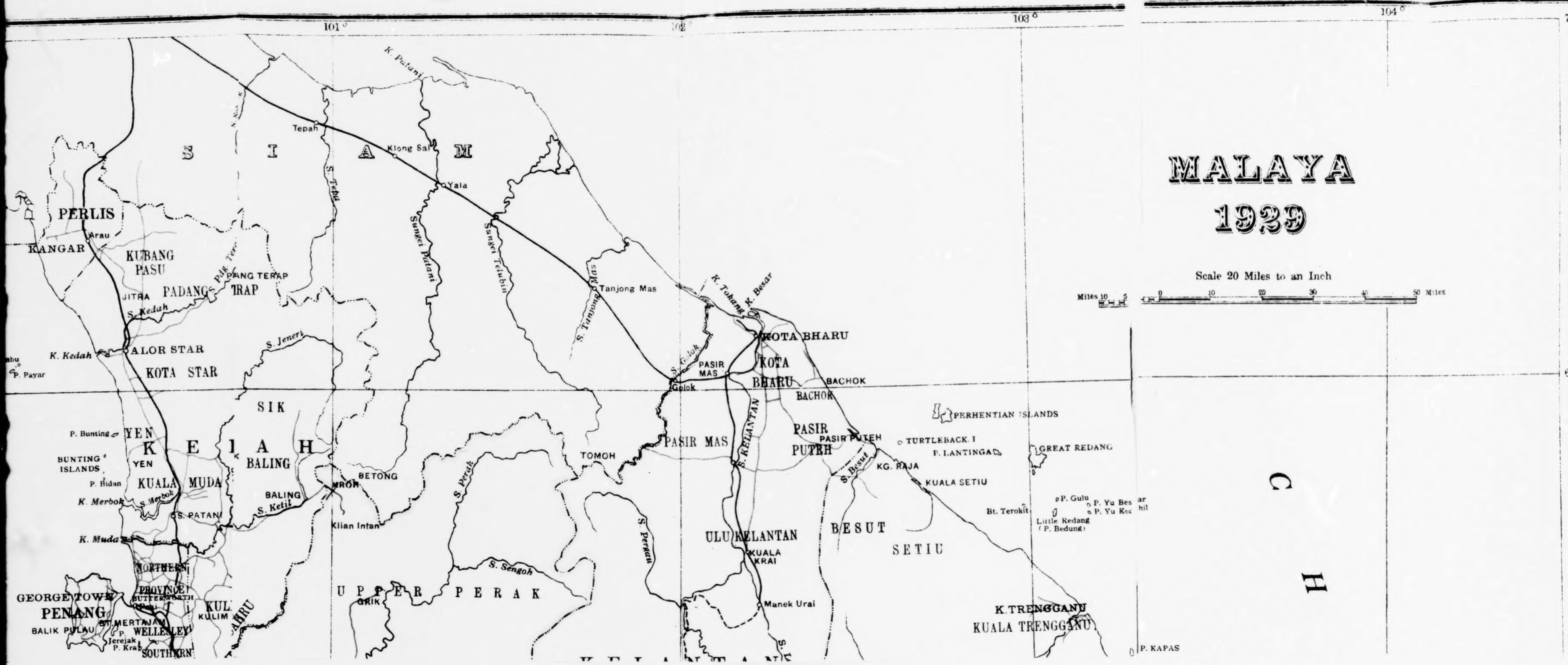
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.








MALAYA
1929
Scale 20 Miles to an Inch
Miles 10 5 0 10 20 30
7°
100°
101°
102°
103°
6°
S I A M
K. Patani
S. Sokong
Tepah
Klong Sai
Yala
S. Tebil
Sungei Patani
Sungei Telubin
Tanjong Mas
S. Tanjong Mas
K. Tabang
K. Besar
KOTA BHARU
KOTA BHARU
S. Golok
PASIR MAS
Golok
BACHOK
BACHOK
PERHENTIAN ISLANDS
TURTLEBACK I
P. LANTINGA
GREAT REDANG
PASIR PUTEH
PASIR PUTEH
S. Besut
KG. RAJA
KUALA SETIU
Bt. Terokit
P. Gulu
P. Yu Besar
P. Yu Kechil
Little Redang (P. Bedung)
BESUT
SETIU
K. TRENGGANU
KUALA TRENGGANU
P. KAPAS
C
H
S. KELANTAN
PASIR MAS
TOMOH
ULU KELANTAN
KUALA KRAI
Manek Urai
S. Pergau
S. Perak
S. Sengoh
UPPER PERAK
GRIK
KELANTAN
BETONG
KROH
Klian Intan
P. TERUTAU
PERLIS
Arau
KANGAR
P. Tg. Dindang
P. LANGKAWI
P. Repak
P. Tepor
P. Timun
P. TUBA
P. Bras Basah
P. LADA
P. DAYANG BUNTING
KUBANG PASU
JITRA
PADANG TERAP
PADANG TERAP
Pdg. Terap
S. Kedah
K. Kedah
ALOR STAR
KOTA STAR
P. Lembu
P. Segantang
P. Payar
S. Jeneri
SIK
SIK
P. Bunting
YEN
YEN
BUNTING ISLANDS
P. Bidan
K E D A H
KUALA MUDA
S. Muda
BALING
BALING
S. Ketil
K. Merbok
S. Merbok
S. PATANI
K. Muda
NORTHERN
PROVINCE
BUTTERWORTH
GEORGE TOWN
PENANG
BALIK PULAU
BT. MERTAJAM
P. Jerejak
P. Krap
WELLESLEY
SOUTHERN
KULIM
KULIM
BANDAR BAHRU
S


MALAYA
1929
Scale 20 Miles to an Inch
Miles 10 5 0 10 20 30 40 50 Miles
101°
102°
103°
104°
S I A M
K. Patani
Tepah
Klong Sai
Yala
Sungei Patani
Sungei Telubin
S. Tebi
Tanjong Mas
S. Tanjong Mas
K. Tabang
K. Besar
PERLIS
KANGAR
Arau
KUBANG PASU
PADANG TRAP
PANG TERAP
JITRA
S. Kedah
ALOR STAR
K. Kedah
KOTA STAR
P. Payar
S. Jeneri
SIK
P. Bunting
YEN
BUNTING ISLANDS
P. Bidan
K E D A H
KUALA MUDA
BALING
K. Merbok
S. Merbok
S. PATANI
S. Ketil
K. Muda
NORTHERN
PROVINCE
BUTTERWORTH
GEORGE TOWN
PENANG
BALIK PULAU
ST. MERTAJAM
WELLESLEY
Jerejak
P. Krab
SOUTHERN
KULIM
BETONG
KROH
Klian Intan
S. Perak
S. Sengoh
U P P E R P E R A K
GRIK
TOMOH
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PASIR MAS
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BESUT
SETIU
S. Pergau
ULU KELANTAN
KUALA KRAI
Manek Urai
K E L A N T A N
PERHENTIAN ISLANDS
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P. Yu Besar
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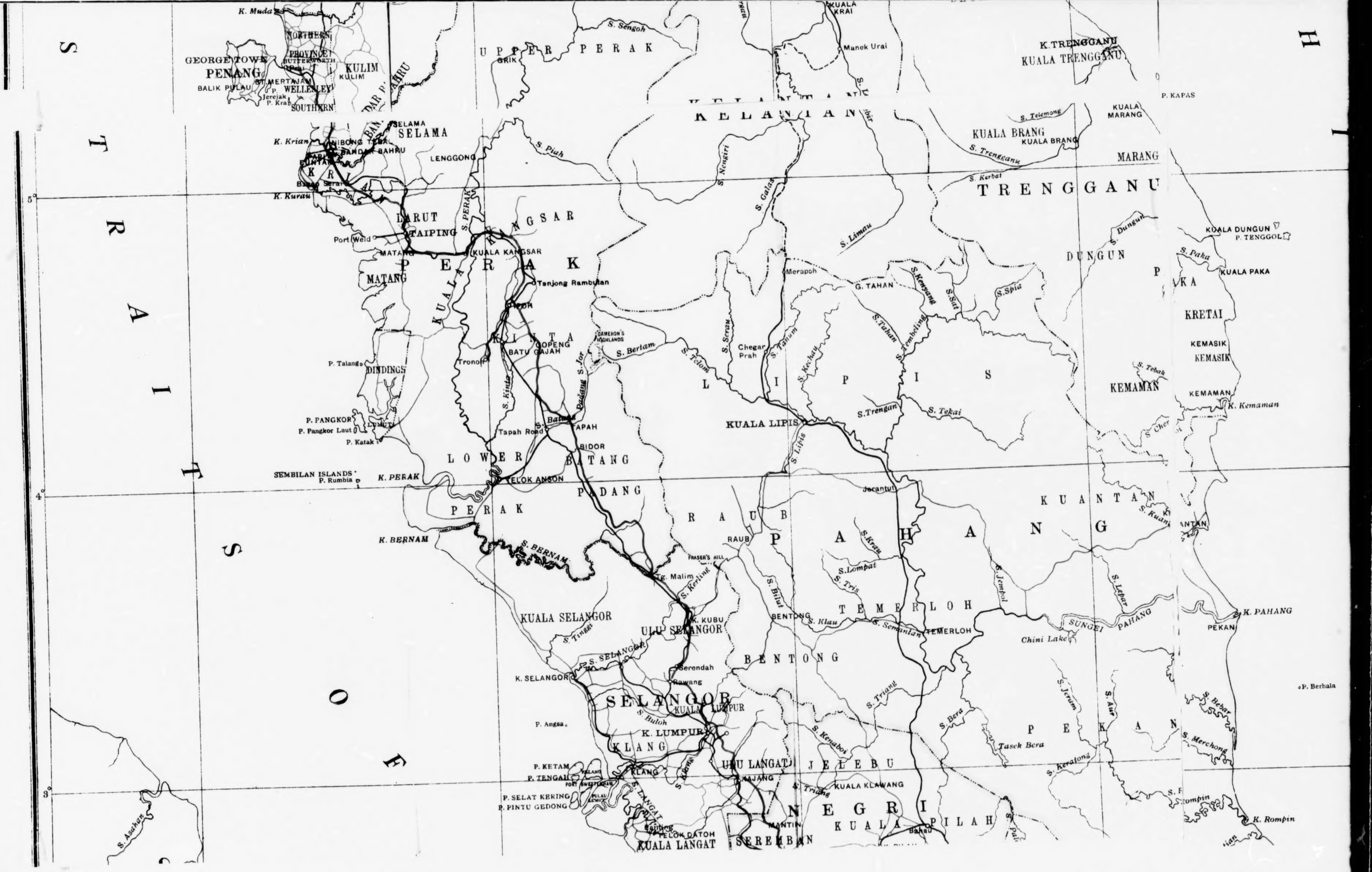
Little Redang (P. Bedung)
K. TRENGGANU
KUALA TRENGGANU
P. KAPAS
C H


STRAITS OF
GEORGE TOWN
PENANG
BALIK PULAU
Jerejak
P. Krah
PROVINCE
BUTTERWORTH
WELLESLEY
NORTHERN
SOUTHERN
ST. MERTAJAM
K. Muda
KULIM
KULIM
K. Krian
NIBONG TEBAL
BANDAR BAHRU
SELAMA
SELAMA
KRIAN
PARIT BUNTAR
K. Kurau
LENGGONG
UPPER PERAK
GRIK
S. Sengoh
S. Piah
S. Perak
LARUT
TAIPING
Port Weld
MATANG
MATANG
KUALA KANGSAR
KUALA KANGSAR
PERAK
Tanjong Rambutan
IPOH
KINTA
GOPENG
BATU GAJAH
Tronoh
S. Kinta
CAMERON'S HIGHLANDS
S. Bertam
S. Jor
Padang
P. Talang
DINDINGS
P. PANGKOR
P. Pangkor Laut
LUMUT
P. Katak
Tapah Road
TAPAH
S. Batang
BIDOR
LOWER PERAK
BATANG PADANG
SEMBILAN ISLANDS
P. Rumbia
K. PERAK
TELOK ANSON
PERAK
K. BERNAM
S. BERNAM
Tg. Malim
FRASER'S HILL
S. Kerling
KUALA SELANGOR
K. KUBU
ULU SELANGOR
S. Tinggi
S. SELANGOR
Serendah
Rawang
K. SELANGOR
SELANGOR
KUALA LUMPUR
S. Buloh
K. LUMPUR
P. Angsa
KLANG
P. KETAM
P. TENGAH
KLANG
PORT SWETTENHAM
P. SELAT KERING
P. PINTU GEDONG
S. LANGAT
S. Klang
ULU LANGAT
KAJANG
Banting
TELOK DATOH
KUALA LANGAT
SEREMBAN
MANTIN
S. Asahan
KELANTAN
KUALA KRAI
Manek Urai
S. Nengiri
S. Galas
S. Limau
Merapoh
G. TAHAN
S. Kenyam
S. Tahan
S. Tembeling
S. Sat
S. Spia
S. Serau
Chegar Prah
S. Tanum
S. Kechau
S. Telom
LIPIS
KUALA LIPIS
S. Trengan
S. Tekai
S. Lipis
Jerantut
RAUB
RAUB
PAHANG
S. Krau
S. Lompat
S. Tris
S. Bilut
BENTONG
S. Klau
TEMERLOH
S. Semantan
TEMERLOH
BENTONG
S. Triang
S. Kenaboi
JELEBU
S. Triang
KUALA KLAWANG
NEGRI
KUALA PILAH
Bahau
K. TRENGGANU
KUALA TRENGGANU
P. KAPAS
S. Telemong
KUALA MARANG
KUALA BRANG
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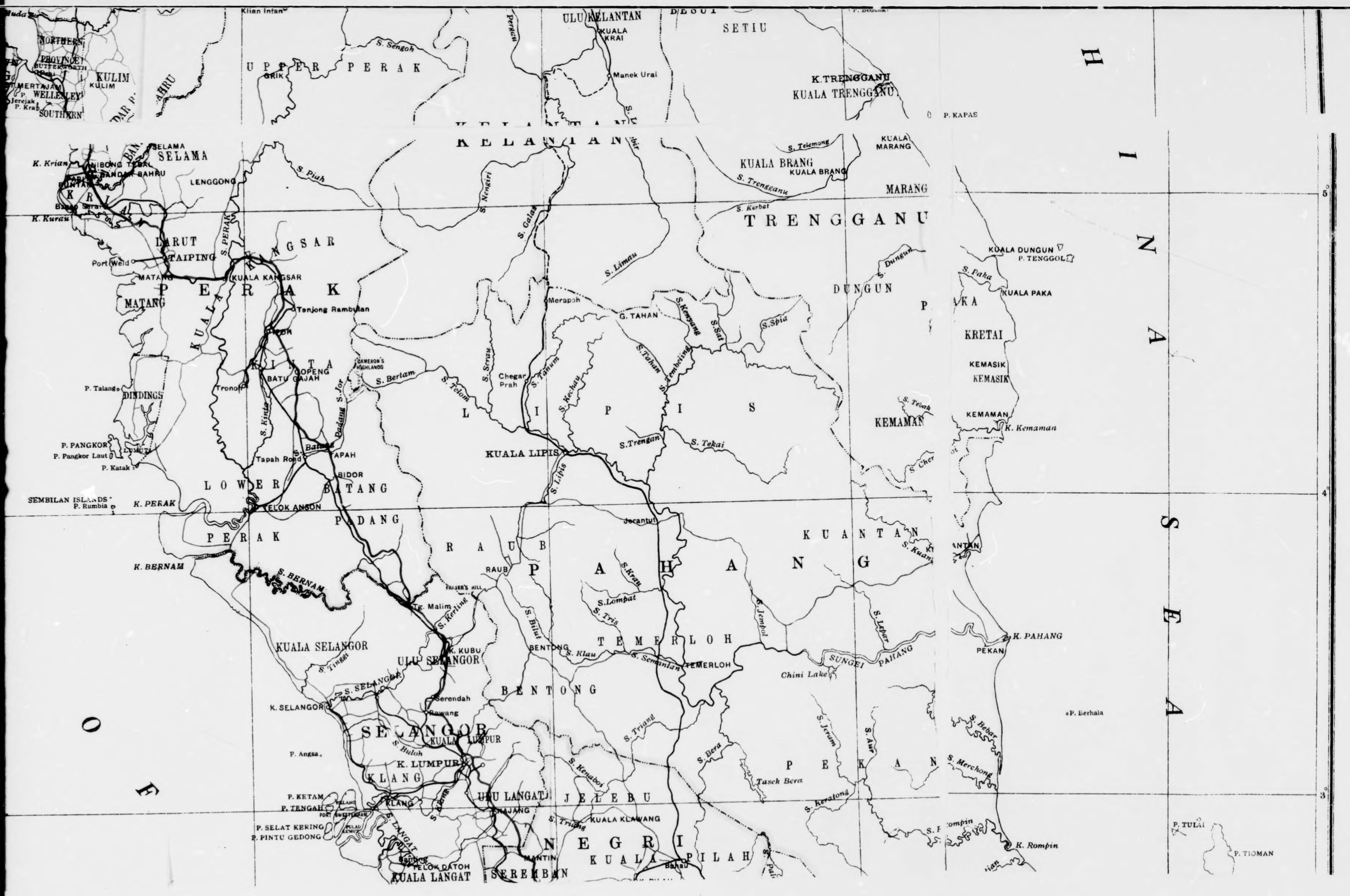
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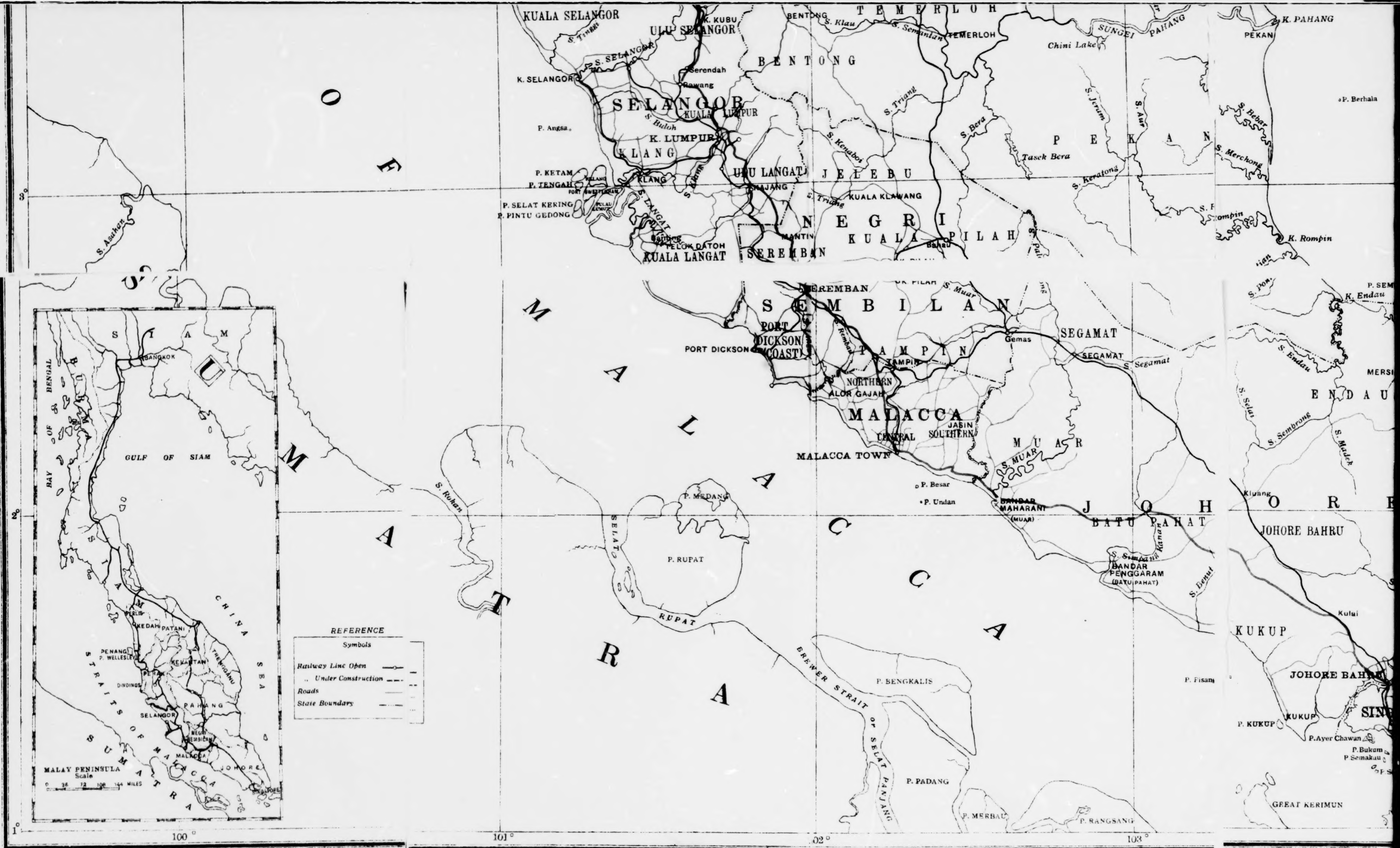

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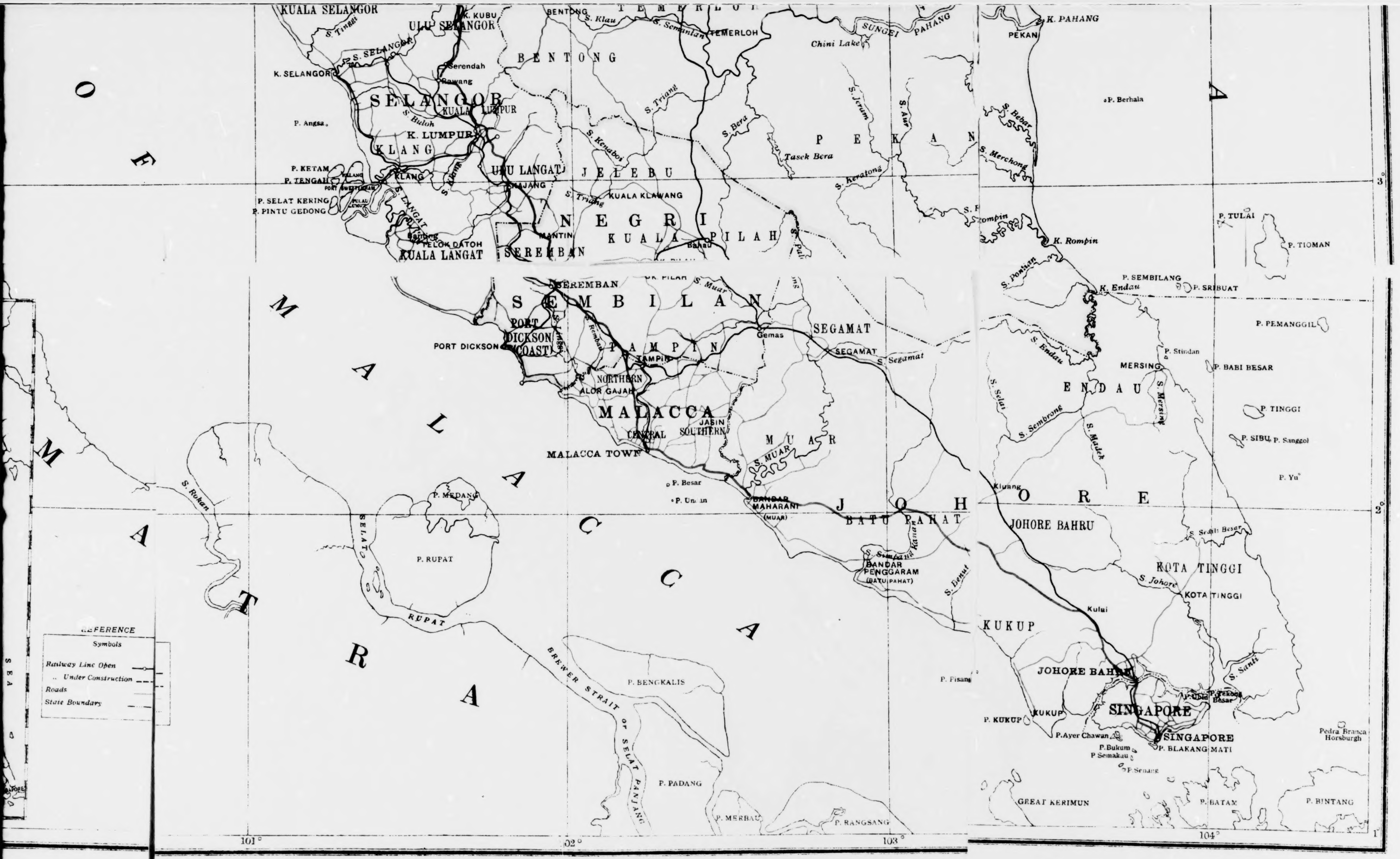

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REPORT FOR 1930

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ANNUAL REPORT

FOR

1930

BY

C. W. H. COCHRANE, C.M.G.,
Chief Secretary to Government, Federated Malay States.

KUALA LUMPUR:
PRINTED AT THE FEDERATED MALAY STATES GOVERNMENT PRINTING OFFICE.

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Supplement to the "F.M.S. Government Gazette," July 3, 1931.

FEDERATED MALAY STATES.

REPORT

OF THE

CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1930.

PREFACE.

HISTORY.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang.

PERAK.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. In the XVIIth century, it was overrun by the Achehnese, and at some time after 1636 a Johore prince, the husband of a Perak princess, was sent by Acheh to rule it under the title of Sultan Mudzaffar Shah. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. The ruins of a factory opened in 1690 may still be seen at Pangkor. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1825 a British arbitrator settled the boundary between Perak and Selangor. By the Burney Treaty with Siam in 1826, the independence of Perak and Selangor was recognized, though the Sultan of Perak was permitted to send tribute to Siam if he desired. In the same year, the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose

advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The murder of the first British Resident (Mr. J. W. Birch) in 1875 led to a military expedition. The country soon settled; and the Malay constitution was restored under a Sultan protected by the British Government. The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

In the XIVth century, Klang, which is now a district of Selangor, is said to have been subject to the Javanese Empire of Majapahit. In the next century, it was given a Penghulu of the family of the Bendaharas of old Malacca, and a son of Sultan Mansur Shah (1458-1477 A.D.) of Malacca by a Chinese wife was made Ruler of Jeram near Langat. During the period of Portuguese ascendency, little is known of the Selangor coast. Barbosa speaks of "much and good tin" won in Selangor. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognized as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since. After the failure of an attack on Malacca by a Bugis prince of Riau, Raja Haji, in 1783, the Dutch blockaded Kuala Selangor, and forced the Sultan to acknowledge the suzerainty of Holland.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

This federation of "Nine States" consists of the four major States of Sungai Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. Sungai Ujong is mentioned in a Javanese poem in 1365 A.D. as being subject to the Javanese Empire of Majapahit. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal

sociological system. Portuguese accounts prove that this immigration had begun in the XVIth century. The evidence seems conclusive that the original Malay federation consisted of Sungai Ujong, Klang (now a district of Selangor), Jelebu, Rembau, Naning (now part of Malacca), Segamat (now in Johore), Pasir Besar (also in Johore, its place having been taken by Johol), Jelai (now Inas) and Ulu Pahang, the region between the Ulu Serting and Temerloh. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, G.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang di-pertuan Besar, Negri Sembilan.

PAHANG.

Chao Ju Kua, a Chinese, writing about 1225 A.D., mentions Pahang as being subject to the old Sumatran Buddhist kingdom of Sri Vijaya. Later, Pahang and Tioman are claimed as conquests of Majapahit. Chinese records of the XVth century speak of the people of Pahang making human sacrifices. The "Malay Annals" tell of a town, Pura, near the estuary of the Pahang river, and mention the gold dust, the elephants and the wild oxen of the country. In the XVth century, Sultan Mansur Shah of Malacca captured the Ruler of Pahang, and married his daughter. Modern Muhammadan Pahang starts with Rulers of the royal house of Malacca. In 1618, the redoubtable Mahkota Alam raided Pahang, and carried off one of its Rulers, who became father of a Sultan of Acheh. Before the old Malacca royal house died out in 1699, its Pahang branch provided several Rulers for the senior throne of Johore, which

directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan, or the Ruler, in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and in Selangor the Secretary to Resident is also a member. The other members consist of members of the royal family, the leading chiefs and some Chinese—in Perak an Indian now sits on the Council. Since the creation of a Federal Council, the State Councils legislate only in matters affecting the State.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation, which was to be known as the Federated Malay States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or any more than one State. The Federal Council, as now constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, the Commissioner, Trade and Customs, one Official Member nominated by the High Commissioner, and twelve Unofficial Members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year. All Federal legislation is passed by it, and the estimates of expenditure and revenue require its approval.

GEOGRAPHY.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North, it borders with Province Wellesley (Straits Settlements), Kedah and Siam; and on the East, it is separated from Kelantan and Pahang by the main range of granite mountains that form the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. On the North, the Krian river is the boundary with Kedah; and on the South, the Bernam river separates the State from Selangor. The highest mountain is Korbu (7,160 feet). The capital of the State is Taiping.

Selangor (3,150 square miles), also on the West Coast, is separated from Pahang on the East by the mountain range, and from Negri Sembilan by the Sepang river. Its highest peak is Ulu Kali (5,820 feet). Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang River in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang River.

Negri Sembilan, south of Selangor, comprises 2,550 square miles. On the South, it borders with Johore, and on the East, with Pahang. In the southern part of the State, the great mountain range has disappeared, and the water-parting between the West and East Coast is merely hilly, and in places is nearly flat ground. The highest peak in Negri Sembilan is Telapak Burok (3,915 feet). Seremban is the capital.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and they arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is large, being from 20° to 25°F. generally. The variation of temperature throughout the year is very small and the excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has never been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon and two shorter seasons separating the end of each of these from the beginning of the other. The beginning and end of the monsoon seasons are usually not well defined, though the onset of the North-East Monsoon may be fairly definite.

The South-West Monsoon as experienced in Malaya is due to a frictional effect, whereby the atmosphere moves in conformity with the South-West Monsoon current of the Indian Ocean, but to a smaller extent. While it cannot as yet be said definitely, there are indications that the movement dies out altogether in the region of Malacca, and south of this the prevailing wind direction is probably south-east at this time of year. The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature. At a height of 2,000 to 3,000 feet, however, the prevailing direction is probably south-westerly.

The North-East Monsoon occurs at the season which corresponds with the winter of northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter half of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March. There are thus two periods, each of about two months in length, between the ending of one monsoon and the beginning of the opposite one, corresponding roughly with the equinoctial seasons. The average rainfall of every district is largely governed by this seasonal division, although the same characteristics do not appear everywhere at the same seasons. On the East Coast there is also a distinct temperature variation with the monsoons, although it is not very great.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for a few miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December, followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry. Along a limited length of coast in the region of Malacca the wettest portion of the year is at the height of the South-West Monsoon, the lowest rainfall occurring in December and January. The change from minimum to maximum is fairly regular, as is also the reverse change.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average for the forty years 1891-1930 of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 feet) for the twenty-seven years 1904-1930 is 242 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, such as Fraser's Hill and Cameron Highlands, the average rainfall is 109 inches, as obtained from six years' records.

Considering the Peninsula as a whole, the heaviest yearly rainfall is experienced along the East Coast where the average is about 120 inches. This average decreases going inland from the coast and is about 100 inches at the foot of the range on the eastern side. Between the range and the West Coast the distribution is more irregular. In North Kedah the rainfall continues to decrease as the West Coast is approached but in South Kedah and Perak there is a notable increase in the rainfall before the coast is reached. The Taiping area has already been mentioned but again at Tapah 146 inches is the average year's fall. Along the West Coast the rainfall decreases fairly uniformly from 108 inches at Penang to 80 or 85 inches on the coasts of Selangor and Negri Sembilan. The eastern part of Negri Sembilan is comparatively dry with an average rainfall of not much more than 70 inches.

The differences in temperature in Malaya are comparatively small, whether temperature variations throughout the year at one place or differences from place to place at the same time of the year are considered. They are, nevertheless fairly definite in some respects and are worthy of mention. The average day temperature in the districts to the east of the main mountain range is lower than in otherwise similar districts west of the range. The differences in the average values in the east and west are due almost entirely to the low day temperatures experienced in the eastern districts during the North-East Monsoon. At Kuala Pahang for example, the day temperature rarely approaches 90°F. during the North-East Monsoon and often fails to reach 80°F. A number of occasions have been recorded on which the temperature did not rise above 75°F., which is not infrequently the lowest temperature reached during the night in most districts. Night temperatures do not vary to the same extent, the average usually being between 70°F. and 75°F. Individual values fall much below this at nearly all stations, the coolest nights commonly following some of the hottest days. The lowest temperature recorded in the plains is 66°F., which has occurred several times. The coast stations do not show quite such low temperatures but even here the night temperature falls below 70°F. from time to time.

The nights are thus seen to be reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature experienced during the six years 1925-1930 at Fraser's Hill (4,200 feet) was 81°F. and at Tanah Rata, Cameron's Highlands (4,750 feet) 79°F. The coolest night at Fraser's Hill during this period was 56°F. and at Tanah Rata 42°F., or only 10°F. above freezing.

The general character of the winds of the Peninsula has already been outlined. Apart from the North-East Monsoon the surface winds are very light. The North-East Monsoon itself rarely, if ever, reaches gale force except in gusts, but between April and November the west coast is liable to be struck by violent squalls known as "Sumatras". Being squalls they are of short duration but, until they have passed, winds up to 45 miles per hour may be experienced. A "Sumatra" is usually experienced as a sudden change of wind direction from south-west to west, or north-west, together with a sudden rise in wind speed from perhaps 10 miles per hour to 30 or 40 miles per hour. This is accompanied by a sudden rise in the barometer and sudden fall of temperature which may be as much as 8°F. The whole change takes place in a few seconds and happens simultaneously along a more or less straight line which may be as much as 200 miles in length. This line runs approximately from north-west to south-east and the whole squall, 200 miles in length, moves in a north-easterly direction at a speed corresponding to the speed of the squall wind.

HILL STATIONS.

FRASER'S HILL.

The control of this hill station remained with the Development Committee throughout the year; the principal items of construction in hand being the erection of a farm 2½ miles below Red Cross Bungalow and the Extension of the Water Supply.. As major development can however be said to be finished the hill station was gazetted at the close of the year as a Sanitary Board area and members of the Board chosen.

It would therefore seem fitting to record shortly the progress of this hill station from its inception in 1917. The following numbers give the completed bungalows in existence at the close of 1930:

Privately owned	16
Straits Settlements Government	1
Federated Malay States Railways	1
Johore Government	1
Admiralty	1
Singapore Municipality	1
Federated Malay States Government Bungalows	11
Red Cross Bungalows	4
The Lodge and Residencies, Selangor and Pahang	3
Federated Malay States Government Miscellaneous	24
Total ...	63

The mileage of roads and paths were as follows:

Metalled	13 miles	57 chains
Unmetalled		16 ,,
Paths	26 ,,	8 ,,

The total costs from 1917 up to end of 1930 were as follows:

Development	$2,339,440
Red Cross Bungalows	199,986
Maintenance	789,997
Giving a total expenditure of ...	$3,129,437

CAMERON HIGHLANDS.

The Development Committee met on seven occasions.

His Excellency the High Commissioner and Lady Clementi paid a visit to the hill in the months of June and July exploring the whole area within the jurisdiction of the Committee and far beyond into the head-waters of the Telom River.

Development continued satisfactorily throughout the year. The contractors for the main road completed all work on their original contract up to the summit of the Highlands on

14th November from which date it was taken over. The extension of this main road from the summit to the neighbourhood of Parit Falls made progress, metalling and bridge building being in hand.

Formation level on the road from Parit Falls encircling the recreation area had been completed. The earthwork of the northern and southern access roads was in hand and the development of the quarry with its access road at Sungei Rotan was making progress. The recreation area was cleared of all jungle, the grubbing of roots included, and a very large proportion of the total area had been planted with grass supplied by the Agricultural Department. Certain sites were cleared and levelled with a view to ascertaining probable costs and illustrating to prospective purchasers what might be expected.

It is worthy of note that only 10 deaths occurred from malaria during the three years that the main road was under construction from the 15th mile to the summit, the cooly forces being as follows:

1928 average number per mensem		...	1,888
1929 ,,	,,	...	1,583
1930 ,,	,,	...	855

The total deaths from some 33 different causes for each of the above years was:

1928 a total of	... ...	35
1929 ,,	... ...	28
1930 ,,	... ...	21

The comparative immunity from disease was due to the reasons following:

(*a*) Medical examination before employment.

(*b*) Intensive co-operation between the contractors, the Medical Department and the Public Works Department.

(*c*) Daily inspection of cooly lines.

(*d*) The provision of a mosquito net for each cooly.

(*e*) Regulated water supplies.

Professor Williamson proceeded to Tanah Rata in June and remained on the Highlands for the remainder of the year investigating mosquito problems.

The total expenditure for the year under the Development Vote was $178,172.74, expenditure by the Public Works Department on the main road construction being $795,733.15.

BUKIT KUTU.

Bukit Kutu Hill, 3,458 feet in height, is a western spur of the main range looking down on the old town of Kuala Kubu. From its isolated position it enjoys a drier climate than Fraser's Hill and the advantage of a very extensive view. The hill is a reserve for the preservation of animals and birds.

A path was constructed from Kuala Kubu and the first bungalow built in 1895 from granite and timber obtained on the spot at a cost of $6,550. In 1904-5 a second bungalow was built at the cost of $9,985.

The encroachment of silt from the Selangor River during the last few years had increased the length of the old path to 8¾ miles and in 1929 a shorter path was constructed from Peretak which reduces the walk up the hill to five miles.

GUNONG ANGSI.

This is a small hill station in Negri Sembilan containing only a single bungalow at a height of approximately 2,500 feet. It is approached from the Tampin-Seremban Road, and is reached by a good bridle-path.

KLEDANG.

This hill near Ipoh, Perak, is 2,646 feet above sea-level, and has only two bungalows. It is reached by a large road to the foot of the hill, and a good bridle-path, 4½ miles long, leads to the bungalows.

MAXWELL'S HILL.

Maxwell's Hill is situated on the mountain range near Taiping, the capital of Perak, and is named after the late Sir William Maxwell, K.C.M.G., who, as Assistant Resident, first made a clearing there. At the Tea Gardens (2,152 feet) on the way up, there is a bungalow with eight bed-rooms. At Maxwell's Hill itself there are six comfortable bungalows at an elevation of between 3,400 and 3,650 feet. "The Cottage" and "The Box" (the bungalow of the British Resident, Perak) are on two peaks at heights of 4,530 feet and 4,076 feet respectively. The rainfall of the hill is high, but the flower gardens are attractive, and the dairy and vegetable gardens are well maintained.

PRINCIPAL LANGUAGES.

The principal languages spoken are English, Malay, Tamil and Chinese. The lingua franca is Malay.

CURRENCY.

The unit of currency is the silver dollar which is divided into 100 cents. The value of the dollar is fixed at present at two shillings and four pence. Subsidiary silver coins are those of value 50 cents, 20 cents, 10 cents and 5 cents. There is also a nickel 5-cent coin and copper or mixed metal coins of 1 cent denomination.

WEIGHTS AND MEASURES.

English, Malay and Chinese weights and measures are used. A pikul (equivalent to 133⅓ lbs.) is sub-divided into 100 katties of 16 tahils each. A koyan consists of 40 pikuls and is equivalent to 5,333⅓ lbs. avoirdupois. A gantang is the equivalent of one gallon and a chupak is equal to a quart.

Chinese equivalents to a tahil, a kati, a pikul and a koyan are a leong, a kan, a tam and si sap tam, respectively. Chinese equivalents to a chupak and a gantang are a chup put and a tang, respectively.

ANNUAL REPORT, 1930.

I.—GENERAL.

The Federated Malay States experienced a very difficult year. Trade conditions continued to be most depressing and there is little hope of any immediate improvement in the situation. There was a serious decline in revenue and attempts are being made to place the permanent expenditure on a less exalted basis, even at the risk of some sacrifice of efficiency and a lowering of the high standards which progress has prompted and prosperity encouraged. Action is being taken to this end, and there is no doubt that with the co-operation of all sections of the community the country will succeed in weathering the crisis.

Tin and rubber went from bad to worse, and the voluntary efforts to regulate output had no appreciable result. Towards the end of the year Government was invited to join with Nigeria, Bolivia, and the Netherlands East Indies in an international tin quota scheme, which has since become an accomplished fact. The scheme, which aims at adjusting supply to demand by compulsory restriction of production, is not flawless; but, given a fair chance, it should assist the industry by keeping unwanted tin off the market and in the ground.

Whether the salvation of the rubber industry, where conditions are more complicated, lies along the same lines, is a matter of opinion: a great variety of individual schemes has been promulgated, but one would like to see a more concerted attempt made by the leaders to solve a very difficult problem.

II.—FINANCE.

Budget for 1930.

The Estimates of Revenue and Expenditure for the year 1930 provided for a revenue of $83,150,992 (excluding Railway revenue) and an expenditure (excluding Railway expenditure on Revenue Account and expenditure on Loan Account) of $86,957,661.

Actual revenue and expenditure.

The actual revenue for the year was $65,560,870 and the expenditure $82,470,192. Thus the deficit was $16,909,322 against an estimated deficit of $3,806,669.

The shortages in revenue as compared with the estimate were:

Customs	$12,890,972
Excise	3,028,300
Forests	320,508
Licences and Internal Revenue	207,609
Light, Water and Power	29,382
Posts, Telegraphs and Telephones	166,382
Railways (Net Receipts)	2,111,147
Land Sales	895,647
Total	$19,649,947

The shortages in Customs and Excise revenue are accounted for as follows:

Customs—		
Tin	Shortage	$ 5,872,539
Rubber	,,	5,413,630
Spirits	,,	1,350,692
Petroleum	,,	514,983
Other Items	,,	106,835
		$13,258,679
Less Tobacco	Excess	367,707
		$12,890,972
Excise—		
Chandu	Shortage	$ 2,440,701
Other Items	,,	587,599
		$ 3,028,300

In the case of Railways, the estimated net revenue over expenditure of $2,111,147 was not realised, while Land Sales failed to yield over a third of what was estimated for the year.

The excesses in revenue as compared with the estimate amounted to $2,059,825 as under:

Lands and Mines	$ 32,298
Fees of Court, etc.	764,109
Municipal	141,479
Timber, etc.	167,142
Factory Profit	62,063
Rent, etc.	65,512
Interest	716,697
Miscellaneous	108,125
Property Sale	2,400
	$2,059,825

The total savings in expenditure amounted to $5,686,695, the largest items being:

Pensions	$ 460,476
Civil Service	26,779
District and Land Offices	98,354
Labour	43,471
Mosquito Destruction Board	78,219
Municipal	189,205
Posts and Telegraphs	424,688
Printing	38,770
Trade and Customs	316,077
Agricultural Department	50,514
Clerical Service	83,499
Education	382,955
Electrical Department	26,167
Electrical Department, Special Services	41,195
Forests	468,469
Malay Officers	70,332
Medical	540,655
Mines	50,318
Miscellaneous, Unreserved	191,883
Police	167,573
Prisons	47,397
Public Works Department	354,227
Public Works—Annually Recurrent	152,024
Public Works—Special Services	879,585
Surveys	312,706
Town Planning	25,270
Total	$5,520,808

Excesses over estimated expenditure totalled $1,199,226, the largest items being:

Rulers and Native Officers	$ 179,979
Exchange	77,960
Miscellaneous, Reserved	502,278
Purchase of Land	345,211
Transport	85,918
Total	$1,191,346

The excess under Rulers and Native Officers is due to the introduction of revised scales of allowances and salaries, while that under Miscellaneous Services is caused by the following special expenditure which was not provided for in the Estimates:

(*a*) Loss and Depreciation on Investments	$257,556
(*b*) Repatriation of Decrepit Chinese	61,429
(*c*) Grant to Kelantan Government	302,599

The excess under Purchase of Land is due to no provision having been made in the Estimates for acquisition of land in connection with River Deviation in Kuala Lumpur.

Public debt. The public debt remained as on 31st December, 1929, at $80,185,714, and consists of the Straits Settlements Sterling Loan of £9,355,000. The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) in May, 1922, at 95, with interest at 4½ per cent.

The Sinking Funds, contributions to which started in 1925, amounted to $13,416,168.

The following statement shows the assets and liabilities on the 31st December, 1930:

Assets and liabilities.

LIABILITIES.		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		1,473,382	67
Sundry Outstanding Accounts		387,060	14
Due to India (Agency Account)		221,451	28
" " (Current Account)		28,776	36
Due to Ceylon (Agency Account)		98,642	41
Due to Crown Agents		60,330	39
Joint Colonial Fund—Crown Agents		1,885,714	29
Family Remittances		4,951	88
S.S. Government War Service Land Grant Scheme		1,131	33
Deposits—			
Courts	$313,681.22		
Forests	294,125.28		
Lands	254,783.95		
Postal	159,959.47		
Postal A/c Stores—Colony	300,000.00		
Planters' Loans Board	600,000.00		
Miscellaneous ...	898,132.42		
		2,820,682	34
Railway Renewals Reserve ...		10,012,252	02
Selangor River Protection Reserve Account		43,362	47
Sundry Funds—			
Bailey Fund ...	$ 954.00		
Police Fine and Reward Fund...	40,992.09		
Public Officers' Guarantee Fund	315,444.74		
Malayan Flood Relief Fund ...	56,913.31		
Composition Stamp Duty Fund	338,921.63		
R.E.R. and R. Reserve Fund	2,500,000.00		
Phillips Agricultural School Scholarship Fund	4,500.53		
Government Motor Vehicles Insurance Reserve Fund ...	20,553.19		
Chandu Department Insurance Reserve Fund...	10,423.00		
Miscellaneous ...	48,199.22		
		3,336,901	71
War Savings Certificates, 1924-1927		280	00
Singapore Naval Base Contribution Account		1,065,558	29
Opium Revenue Replacement Reserve Fund		24,494,171	71
Suspense		123,636	29
Capital Fund—Bagan Serai Rice Mill		382,129	73
Capital Fund—Kuala Kurau Rice Mill		250,000	00
Capital Fund—F. M. S. Government Factory		400,000	00
Surplus—			
Reserve for Revenue Capital Expenditure & Public Works and Special Services	...$13,765,446.00		
Balance unallocated ...	...46,843,805.37		
		60,609,251	37
		107,699,666	68

ASSETS.		$	c.
Cash in Treasuries and Banks as per distribution statement		2,666,846	22
Cash with Agencies—			
Malayan Information Agency ...	$ 15,045.25		
Penang Agency	25,110.39		
Singapore Agency	139,032.55		
		179,188	19
Cash in Transit		503,652	72
Fixed Deposits		12,070,000	00
Investments (Surplus Funds)—			
S.S. Municipal Debentures	$ 1,263.75		
Sterling Securities	8,412,463.72		
		(*b*)8,413,727	47
Perak River Hydro-Electric Power Co., Ltd. (at cost)	$4,478,571.43		
Nipah Distilleries of Malaya Ltd. (at cost)	42,857.15		
		(*b*)4,521,428	58
Investments—Singapore Naval Base Contribution Account		1,065,558	29
Investments—Opium Revenue Replacement Reserve Fund		24,410,276	84
Investments (Specific Funds)—			
Bailey Fund	$ 954.00		
Police Fine and Reward Fund ...	34,146.79		
Public Officers' Guarantee Fund	307,178.29		
Malayan Flood Relief Fund ...	56,893.31		
Securities Deposits Account ...	6,748.91		
Phillips Agricultural School Scholarship Fund	4,500.53		
Composition Stamp Duty Fund, 4½ per cent. with Crown Agents	338,921.63		
		749,343	46
Family Remittances		1,013	95
Due by other Governments—			
Crown Agents	$ 1,994.29		
Ceylon	11.44		
Johore	8,807.52		
Kedah	2,659.26		
Kelantan	19,431.45		
Sarawak	299.50		
Singapore	68,156.26		
Trengganu	13,856.49		
		115,216	21
Sundry Outstanding Accounts		21,879	30
Loans—			
Siamese Government (*c*) ...	$32,611,981.05		
Brunei Government	395,000.00		
Kelantan	300,000.00		
Planters	2,330,538.93		
War Service Land Grant Scheme	1,754,702.46		
Perak River Hydro-Electric Power Co. Ltd.	7,285,714.28		
Agricultural	36,563.17		
Buildings	406,873.85		
Miscellaneous	1,589,333.16		
		46,710,706	90
Advances		105,981	33
Imprests		90,711	27
Bentong Tailings Retention Scheme		257,259	92
Stores and Materials Account, Railways ...		2,677,860	38
" " " Post Office ...		1,008,687	38
" " " P.W.D.		127,827	28
" " " Electrical Board		730,107	56
" " " Timber Branch...		8,700	24
" " " Marine Slipway...		48,768	71
" " " Burma Rifles ...		103,163	42
Marine Slipway Account		15,000	00
Stock of Minor Forest Produce		10,412	84
Suspense		54,218	49
Bagan Serai Rice Mill		382,129	73
Kuala Kurau Rice Mill		250,000	00
F.M.S. Government Factory		400,000	00
		107,699,666	68

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of the issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) Investments have been taken at valuation on 31st December instead of at cost price as hitherto. To this exception has been made in respect of Perak River Hydro-Electric Preference Shares and Nipah Distilleries for which no market quotations are available and which are included at cost price.

(*c*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

Loan to Siam.

The loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $32,611,981 on the 31st December, 1930, having been reduced by the payment of the seventh instalment due on 1st January, 1930. As this loan is being repaid by equal yearly payments to include both principal and interest, the principal part of the instalments will steadily increase.

Loans to Brunei and Kelantan.

The loan to Brunei which stood at $399,000 on 31st December, 1929, has been reduced to $395,000 by the payment of the annual instalment due in 1930.

A loan of $300,000 was made to Kelantân in 1930.

Surplus.

The surplus on 31st December, 1929, was $80,018,574. As the expenditure for the year exceeded the revenue by $16,909,322 and a sum of $2,500,000 has been provided out of surplus for the Rubber Experimental Research and Propaganda Fund Reserve, the surplus was reduced to $60,609,252 on 31st December, 1930, of which a sum of $13,765,446 has been reserved for Public Works, Special Services, leaving a balance of $46,843,806 unallocated on 31st December, 1930.

The liquid assets, comprising cash, fixed deposits, Joint Colonial Fund and easily realisable investments amounted to $23,833,415 at the end of the year, as compared with $46,393,605 at the beginning; the principal sources of reduction being a deficit of about $17 millions on the year's working and the loan of £850,000 to the Perak River Hydro-Electric Power Company Limited. This does not take into consideration the investments earmarked for certain specific funds, nor the amount due to the Joint Colonial Fund which is shown as a liability in the General Balance Sheet.

Singapore Naval Base.

To meet payments of the contribution of £2,000,000 towards the cost of the Singapore Naval Base, investments worth £2,000,000 were set aside in 1926 to form a specific fund. Up to the 31st December, 1930, payments amounting in all to £1,908,000 had been made to the Admiralty, War Office and Air Ministry, leaving a balance on the fund of £92,000, representing the final instalment due to the War Office.

Opium Revenue Replacement Reserve Fund.

The Opium Revenue Replacement Reserve Fund stood at $24,494,172 on 31st December, 1930, of which $24,410,277 was represented by investments and the balance by cash awaiting investment. This fund was started with $10 millions provided out of revenue in 1925, to which has been added 15 per cent.

of the annual revenue from chandu sales together with the accumulated interest. The yearly contributions from revenue were as follows:

1926	$2,385,616
1927	2,242,500
1928	1,906,521
1929	1,859,971
1930	1,433,895
	$9,828,503

Railway Renewals Reserve Fund.

The Railway Renewals Reserve Fund stood at $10,012,252 on 31st December, 1930. The contribution added in respect of the year 1930 was $4,183,105.

Rubber Experimental Research and Propaganda Fund.

This Fund created out of appropriation from surplus funds stood at $2,500,000 on 31st December, 1930.

Sterling loan capital account.

A statement of the sterling loan capital account is published as Appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on railway and other works up to 31st December, 1930, accounted for $72,824,167, leaving a balance of $1,473,382 still available to meet capital expenditure during 1931. This balance is in excess of the estimated balance of $900,000, due to a refund of about $200,000 made by the Railway and to the underspending by the Posts and Telegraphs Department of about $300,000.

III.—PRODUCTION.

AGRICULTURE.

Staff.

The establishment of the Department of Agriculture on the 30th December, including the Director of Agriculture, comprised 48 European officers; of these 29 were on the Research side, 12 on the Field side, 2 on the Instructional side, 3 were seconded for duty in the Unfederated Malay States, 2 for duty with the Rubber Research Institute of Malaya and 1 for duty with the Co-operative Department.

Organisation and policy.

At the beginning of the year proposals for the reorganisation of the department were submitted to Government by the Director, comprising schemes for the regrading and redistribution of duties of both the European and Asiatic staff, the recruitment and training of Asiatic staff, the enlargement and extension of the field work including a comprehensive provision of test and experiment stations throughout the country and the considerable enlargement of extension work, the devising of an agricultural policy for the department, the provision of new buildings and laboratories and the co-ordination of the work in the Straits Settlements and Federated Malay States with that in the Unfederated Malay States. By the end of the year agreement had been reached on practically all the proposals and action had been taken to give effect to certain of them, including particularly the proposals for a provision of additional experiment test and demonstration stations and the provision of new buildings for the department which are badly needed.

School of Agriculture.

The new School of Agriculture at Serdang was completed during the year and a considerable proportion of the equipment had been procured. The curriculum for the school was finally approved, steps were taken for the recruitment of the necessary staff, and an Advisory Committee appointed. The school will, it is anticipated, start work in May, 1931.

Expenditure and revenue.

The total expenditure of the department on the Federated Malay States including the Head Office and State provision was $1,039,143, of this 25 per cent. of the expenditure on the head-quarters staff was contributed from Straits Settlements funds. The revenue of the department collected in the Federated Malay States was $39,287.

Rubber.

The total area under rubber at the end of 1930 in the Federated Malay States was estimated to be 1,475,904 acres, made up as follows:

	Holdings 100 acres or over.	Holdings under 100 acres.	Total.
Perak	276,912	248,671	525,583
Selangor	329,271	154,243	483,514
Negri Sembilan ...	256,706	80,173	336,879
Pahang	54,669	75,259	129,928
	917,558	558,346	1,475,904

The production was as follows—on estates of over 100 acres:

	Tons.
Perak	44,617
Selangor	52,000
Negri Sembilan	38,432
Pahang	5,740
	140,789

Production on small-holdings for each of the individual States is not available but the total estimated production for the Federated Malay States is 110,206 tons, making a grand total of 250,995 tons.

The estimated area of new plantings of rubber is as follows:

	100 acres or over.		Under 100 acres.		Total.
Perak	3,005	...	3,144	...	6,149
Selangor ...	2,080	...	1,000	...	3,080
Negri Sembilan	3,690	...	2,000	...	5,690
Pahang ...	1,365	...	2,438	...	3,803
	10,140	...	8,582	...	18,722

During the year it was decided to suspend further alienation of land for rubber planting and since September no fresh alienations have been made, consequently additions to the planted area so far as is known have since that date only occurred on land previously given out.

Continued attention has been given by estates to the planting of high-yielding clones of budded rubber. During the year importations of budwood from the Netherlands East Indies has continued but the quantity imported was less than in 1929, a result partly due to financial reasons, and partly to the increasing production of budwood from estates' multiplication nurseries. During the year it was estimated that 2,756 acres were established in budded trees from proven clones.

The total area of budded rubber at the present time is estimated to be 70,000 acres, of which 60,000 acres are from proven clones.

The sale price of rubber during 1930 fell to the lowest figure in the history of the industry. The average Singapore price of first grade smoked sheet during the four quarters of the year was as under—

1st quarter	... ...	25	cents per lb.
2nd ,,	... ...	22¼	,,
3rd ,,	... ...	15½	,,
4th ,,	... ...	13¼	,,

In an attempt to reduce stocks and so improve the price, a "tapping holiday" was agreed upon during the month of May. This was very generally observed by the owners of big estates (i.e., those of 100 acres or over), with the result that the crop harvested in May on such estates was only 1,688 tons as comparable with 11,137 tons harvested in April. The smaller holdings did not observe this holiday and it is agreed that its effect upon the sale price of rubber was negligible.

Later in the year official conversations between the Governor of the Netherlands East Indies and the High Commissioner for the Federated Malay States were arranged. During these the question of the possibility of imposing some form of restriction of output or export to be enforced by the Governments concerned was discussed. It was later announced that no official steps to restrict the export or production of rubber were contemplated.

The larger estates in general maintained the normal standard of upkeep almost throughout the year, but some curtailment of field work is almost certain to be enforced on estates by the prevailing low price of rubber. Small-holdings have been very heavily tapped and the conditions as regards upkeep have certainly deteriorated. Towards the end of the year a considerable number of the poorer holdings had gone out of tapping, while tapping had been discontinued on a number of estates. It is estimated that at the end of the year the area out of tapping in the Federated Malay States was 133,213 acres, of which 32,373 was being rested because of A B C or A B C D system of tapping.

During the unusually dry weather which prevailed for the first eight months of the year, leaf Mildew disease, caused by *Oidium Heveae* occurred in several parts of the Federated Malay States, notably in South Negri Sembilan. It disappeared on the advent of wetter weather without the aid of control measures, though the latter were investigated by the Rubber Research Institute in case the need for them should arise. A recrudescence of Mouldy Rot disease called for careful attention during the wet weather at the end of the year, particularly in Selangor and Southern Perak. Owing to the low price of rubber owners of small-holdings found increasing difficulty in providing the money necessary for the efficient control of this and other diseases.

Increasing attention has been directed to the incidence of root diseases in rubber and their importance as factors in the economy of rubber estates is becoming widely realised.

Market conditions have resulted in considerable economies in production and a large number of estates have found it possible to reduce their cost of production to an f.o.b. figure of 10-12 cents per lb. Straits currency, a figure which, however, leaves little or no margin of profit and allows nothing for improvements.

Rubber Research Institute.

Research work in relation to the rubber industry was continued by the Rubber Research Institue, the activities of which have been maintained at full strength in spite of slump conditions. Appreciation of the work of the Institute is widespread in planting circles. Close liaison has been maintained by the Institute with the Departments of Agriculture and Co-operation, the former covering all disease control work and propaganda among small-holdings and the latter undertaking work in relation to improvement of manufacturing and marketing methods among small-holders.

Coconuts.

During 1930 a census of the area under coconuts was conducted by the Department of Agriculture in connection with the World's Agricultural Census, the total areas in the various States being shown below :

Perak	108,940
Selangor	110,294
Negri Sembilan	5,966
Pahang	14,530
	239,730

The Singapore price of fair merchantable quality copra declined steadily from $8.98 per pikul in June to $5.66 per pikul in December.

The average price of this quality was $7.45 per pikul and of the sun-dried quality $7.80 per pikul, as compared with $9.09 and $9.55, respectively, in 1929.

Experiments following a standard pattern have been laid down on five coconut estates, with a view to ascertaining the manurial requirements of this palm on different types of soil. Selection manuring and cultivation experiments have been continued at the Experiment Station, Klang, and on Carey Island.

With the financial assistance of the Empire Marketing Board investigations on improved methods of preparing copra were continued, a chemist being specially appointed for this purpose. Good progress has been made and some preliminary results have been published.

Control of the nettle caterpillar, *Setora nitens* (*Oryctes rhinoceros*), continued to call for and to receive attention. Sporadic outbreaks of the leaf-eating caterpillars, *Artona catoxanths*, also occurred but were controlled by the insect enemies of this pest. Investigations of the economic importance and control of the greater coconut spike moth, *Tirathaba rufevena*, were concluded and indicated that the damage caused by this insect is hardly of sufficient importance to justify the use of the simple method of control evolved.

During the year the question of the provision of improved research facility for the coconut industry was discussed with planters. There seems reason to believe that the ultimate provision of a separate research organisation for this crop supported wholly or in part by the industry is desirable and it is hoped that when market conditions improve somewhat it may be possible to pursue the subject further.

Padi.

The estimated areas under wet *padi* culltivation and the estimated yields therefrom for the year 1929-1930 are given below:

	Area in acres.		Yield in gantangs.
Perak	82,105	...	19,051,253
Selangor	19,691	...	4,933,342
Negri Sembilan ...	30,847	...	7,762,520
Pahang	24,346	...	3,583,819
	156,989	...	35,330,934

Throughout North Perak and in Krian weather conditions were adverse to the crop and this combined with stem-borer attacks gave rise to low yields, while poor yields were also experienced in Selangor. Average yields were experienced in Negri Sembilan, Southern Perak and Pahang.

For the season 1930-31 the returns show that the estimated total area of 157,140 acres has been planted. Prospects are on the whole better than for the two preceding seasons, although in the Krian area late rains retarded planting and will probably affect yields.

Investigations have been continued on the life histories and control of the different *padi* stem borers, of which the caterpillars of *Diatraea auricilia*, *Sesamia inferens* and *Schoenobius incertellus* are the most important. These have been found to be very prevalent in certain districts and may be responsible for causing a serious annual reduction of yield. Experiments are in progress to ascertain the effect, as a control measure, of producing in the laboratory large numbers of the insect *Trichogramma nanum*, parasitic on the eggs of the stem borers, and liberating them on *padi* areas.

Other pests which have been somewhat prevalent on *padi* nurseries and recently transplanted *padi* during the present season are the rice caterpillar (*Spodoptera mauritia*) and the case worm (*Nymphula depunctalis*).

Rats appeared to be unusually numerous in Krian, but the rat campaign was successful in preventing any serious damage to the standing crop with the exception of about 500 acres. Elsewhere greatly increased attention has been paid to rat control by means of organised work among the peasantry by agricultural officers with beneficial results.

At the Titi Serong Experiment Station in Krian selection and varietal tests have been continued. Manurial experiments, which have hitherto given little definite information, have been reorganised on a new scheme, devised in the light of past experience, and laid out in Krian and at the Talang Experiment Station at Kuala Kangsar.

Standardised test plots to determine the suitability of selected strains to local conditions were established during the year at Talang, Lenggong, Klang, Kajang, Dong and Jelebu.

Distribution of certain of the selected strains of high-yielding *padis* were made and in the Krian district a start was made with the establishment of centres at which selected seed was sold to cultivators at cost price for cash.

A Committee was appointed by His Excellency the Governor in July, with the Director of Agriculture as Chairman, to enquire into rice cultivation in Malaya. This Committee visited and issued separate reports on each of the *padi* growing areas in the Straits Settlements. The Committee issued a Progress Report containing the results of their deliberations up to the end of October towards the end of the year. The final report will, it is anticipated, be submitted early in 1931.

Oil palm.

The area planted with oil palms is as follows :

	Mature.	Not determined.	Immature.	Total.
	Acres.	Acres.	Acres.	Acres.
Perak	2,541 ...	1,881 ...	7,958 ...	12,380
Selangor ...	11,271 ...	— ...	1,781 ...	13,052
Negri Sembilan	600 ...	— ...	302 ...	902
Pahang ...	— ...	— ...	787 ...	787
Total F.M.S. ...	14,412 ...	1,881 ...	10,828 ...	27,121

The production of palm-oil in Malaya during 1930 was 3,253 tons, valued $903,768, and palm kernels 486 tons, $81,262.

Prices for palm-oil declined sharply during the year from £33 a ton in January to £16 12*s*. in December, the average price being £23 10*s*. 3*d*. for the year. During the year five new palm-oil factories started work.

A previously unrecorded disease of oil palm came to notice during the year, which, it would appear, is probably occasioned by a species of Fomes related to, if not identical with, that occasioning root disease of rubber. Satisfactory methods of treatment have been worked out by the Department of Agriculture and are being applied on estates.

Experimental work in relation to oil palm has been continued at Serdang Plantations and certain estates. It includes investigations in relation to pollination, pruning, manuring, cultivation and drainage, and also investigations on the manufacturing side. The experimental oil palm factory at Serdang was equipped during the year with a Krupp press. This will enable comparative work to be undertaken on the two methods of extracting palm-oil that are at present practised.

Tea. At the end of 1930 it is estimated that the total area of tea planted was 1,244 acres. Increasing interest continues to attach to this form of cultivation and considerable areas have been alienated, particularly in the Cameron Highlands region. The experimental investigations both on Highland and Lowland tea were advanced a stage further and pluckings were made from the Experimental Station at Cameron Highlands. Small quantities of hand-made tea of satisfactory quality are being produced.

Arrangements were made for expanding the experimental area under tea at Cameron Highlands, while further additions were made to the lowland tea at Serdang. The erection of an Experimental Tea Factory at Serdang was commenced and proposals approved for the installation of tea making machinery at Cameron Highlands.

Pineapples. The total area planted under pineapples is estimated to be 4,910 acres. Of this 3,952 acres are in Selangor which is the only State in which the crop is grown for export. Prices for fresh and tinned pineapples fell to a very low level during the year. In the main cropping season 100 ordinary fruits were sold for cents 80 to $1.20 and 100 selected fruits $1.50-$2.50. The closing prices of 1½ lb. pineapple cubes were $3.30 to $3.40 per case of tins. These prices were hardly sufficient to pay for the cost of cultivation and transport or to leave any margin of profit for factories.

The Malayan Information Agency staged exhibits of Malayan tinned pineapples at the Antwerp Exhibition and at various exhibitions and shows in Great Britain. These displays have helped materially to increase the demand for Malayan pineapples.

A very thorough investigation into the economic side of the industry was made during the latter part of the year. It would appear that if more satisfactory internal economic conditions can be brought about the industry possesses considerable potentiality for expansion. During the year provision was made by the Governments of the Federated Malay States, the Straits Settlements and Johore for the inauguration of a pineapple experiment station at Lim Chu Kang in Singapore Island, where a site comprising 33 acres was selected and the development of an experiment station started. In addition experiments with pineapples were laid out at Serdang.

Coffee.

Interest in coffee cultivation was maintained. Exports amounted to 73.8 tons valued at $36,109. Damage was again recorded from certain estates owing to the attack of the beetle *Crychypeous Hampei.*

Government Experimental Stations.

The work of the Experimental Plantation at Serdang was maintained on the same lines as in previous years and continued to prove of interest and value. Additions were made to the buildings and to the stock farm, while dairy buildings were re-organised and the breeding of pigs was begun. It was decided that the Experimental Station at Cameron Highlands should be maintained on the present site and not removed to Renglet; in consequence, further additions to the station have been undertaken.

Publications.

The *Malayan Agricultural Journal*, which is a monthly publication of the Department of Agriculture, was re-organised and enlarged at the beginning of the year and obtained a satisfactory increase in circulation. Six Special Bulletins containing accounts of research work have been published and the two quarterly vernacular journals of the Department—one in Chinese and one in Malay—appeared regularly and have been of considerable assistance to native agriculturists.

Agricultural Shows.

Successful Agricultural Shows were held at Kuala Lumpur in April, at Seremban in July, at Taiping in August, and at Kuantan and Temerloh in September. At each of these the Department of Agriculture and the Rubber Research Institute of Malaya staged instructional exhibits.

School gardens.

There are 386 school gardens in the Federated Malay States, all of which were regularly supervised by Agricultural Field Officers during the year; the standard of work continued steadily to improve.

Chinese agriculture.

Chinese Sub-Inspectors of Agriculture are attached to the Department in Perak and Selangor-Negri Sembilan. Their work has been mainly concerned with Chinese vegetable growers. These efforts have been in progress for the past three years and there is reason to believe that they are having beneficial effects.

The dairy and vegetable farm at Fraser's Hill.

The inauguration of a modern Dairy, Poultry Farm and Vegetable Gardens at Jeriau, 2½ miles distance from Fraser's Hill, for the purpose of supplying the requirements of the Hill Station was started during the year and will be completed early in 1931. The undertaking will be under the charge of the Department of Agriculture and will represent an effort to establish dairying on modern hygienic lines.

Agricultural Conference.

An Inter-Departmental Agricultural Conference was held in Kuala Lumpur at the end of October, which was attended by representatives of the Agricultural, Co-operative and Veterinary Departments and the Rubber Research Institute under the presidency of the Director of Agriculture. A number of important questions were discussed and recommendations made on several points connected with agricultural policy.

FORESTRY.

General.

Features of the year's work were the introduction in Northern Perak of the system of departmental regenerative treatment that has given successful results in Negri Sembilan, and the reorganisation of the system of outturn and revenue accounting on simpler and more efficient lines. Proposals for decentralising and simplifying the machinery for purchase of sleepers and other timber required by the railways and other Government departments were under consideration towards the close of the year.

The Palong Scheme.

A committee was appointed in April to consider the advisability of continuing the scheme for departmental timber operations at Palong. After exhaustive consideration it was decided, in view of the heavy expenditure involved, the difficulties anticipated in regenerating forest subjected to mechanical logging, uncertainty with regard to the disposal of the output, and the probability that the scheme, if proceeded with, would have adverse repercussions on the local timber industry, to recommend to Government that it should be abandoned, and this recommendation was accepted. That there is much scope for improvement in the methods of timber extraction and conversion employed by local enterprise is however recognised, and the Government has secured the services of a forest engineer of wide experience to study these methods and advise as to means by which such improvement can be effected consistently with the established policy of forest conservation.

Research. Satisfactory progress was made with the organisation of forest research, and the decision taken towards the close of the year to place the timber-testing laboratories under the charge of the Forest Research Officer will make for greater co-ordination of effort in this field. An important project was launched with the object of determining the suitability of certain hitherto little used Malayan woods for use as railway sleepers after preservative treatment; the same tests should provide information that will be of value not only in Malaya but in other countries, relative to the mechanical properties required in a sleeper wood. Silvicultural research is still hampered by the difficulty of providing sufficient personnel for field work, but good use has been made of the resources available. The investigations of the Forest Chemist, which have hitherto been concerned mainly with minor forest produce, were continued. It has been decided to enlarge the existing facilities for the technical training of the subordinate staff, which can be done without material addition to present expenditure.

Staff. At the close of the year the Senior Staff of all three branches of the Forest Department consisted of 43 officers, exclusive of two probationers under training at the Imperial Forestry Institute.

The locally-engaged English-speaking staff consisted of seventeen in all, six Extra Assistant Conservators and eleven Sub-Assistants including three probationers.

The sanctioned strength of the subordinate staff was 520, exclusive of 68 clerks, 40 boatmen, the permanent labour force and menials. These figures do not include the temporary clerical staff of the Timber Purchase Section.

Reserves. Progress with formation of reserves proceeded normally and the year closed with 7,012 square miles of forest reserved and 315 square miles proposed for reservation. A large part of the reserved area consists of protective forest on steep slopes and at high elevations, much of which will never be capable of producing timber. Except in a tract of limited extent, where some reserves will be needed for the supply of local requirements, reservation in the three western States is nearing finality.

Output. The outturn of timber, firewood and charcoal amounted to 197,902, 366,016 and 23,579 tons, respectively, the decreases being 53,875, 190,049 and 4,912 tons as compared with the output of 1929. In the case of timber the fall is attributable to the general depression: fuel continues to suffer from the competition of alternative sources of power which like other commodities is being over-produced. Twenty-eight per cent. of the timber and 59 per cent. of the fuel output was derived from reserves.

Revenue. There were substantial increases in the revenue from *damar penak* and gutta-percha but unfortunately these are not due to any appreciable improvement in the state of the market but to the disposal of accumulated stocks. However, towards the end of the year there were signs of a revival in the market for gutta-percha, and tapping is now being organised to meet it. The output of *jelutong* in 1930 shows a considerable decline in comparison with the previous year.

Forest revenue generally was severely affected by the slump and, leaving Timber Branch revenue out of account, declined from $1,756,195 to $1,313,871, representing a drop of 25 per cent. The obvious need for drastic curtailment of expenditure has been recognised by a reduction, consequent on the abandonment of the Palong scheme and other economies, of 30 per cent. in the Estimates for 1931 as compared with those of the previous year.

Publications. Publications during the year consisted of Malayan Forest Record No. 8 "Durability of Malayan Timbers" and a set of tables of cubic contents of round and sawn timber. A further record dealing with the rate of growth of Malayan trees was in the press, and a Forest Manual, codifying departmental rulings, instructions and precedents, was nearing completion at the close of the year.

MINING.

Export of tin. The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 62,065 tons compared with 67,041 tons in 1929 and 61,935 tons in 1928.

The export of tin-ore represents about 99.2 per cent. of the total. The 1930 exports were 4,976 tons lower than those of 1929. The export duty (in millions of dollars) was $9.1 in 1930, $14.5 in 1929 and $15.1 in 1928.

Price of tin.

The tin price at the opening of the year was $91.25 per pikul. From then on right throughout the year the price declined steadily until by the middle of December it had reached $54.12½ per pikul, the lowest level for thirty years. During the last two weeks of the year a slight rally took place and the year closed with the price standing at $61.25. The highest price for the year was $92.25 per pikul recorded on the 3rd of January and the average price for the year was $72.89.

Fluctuations in price of tin.

The following table shows the fluctuations in the price of tin for the last seven years in dollars per pikul:

Heading.	1924.	1925.	1926.	1927.	1928.	1929.	1930.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Highest ...	148.00	145.50	157.50	159.00	131.50	115.50	92.25
Average ...	124.19	131.77½	144.59	144.93	114.18	104.37½	72.89
Lowest ...	100.75	116.00	131.75	127.37	103.62½	89.25	54.12½
Fluctuation	47.25	29.50	25.75	31.63	27.87½	26.25	38.12½

Labour.

The labour force engaged in mining (including dulang pass holders) was 89,517 at the end of the year. The figures for the preceding three years were: in 1929, 113,415; in 1928, 119,550; in 1927, 130,424. The total does not include labour employed on the extraction and transport of firewood. The adverse conditions which prevailed throughout the year were responsible for the very large decrease in the labour force. Unemployment amongst mining coolies was fortunately not so prevalent as might have been expected, as a large number of coolies after leaving the mines was absorbed elsewhere.

Tungsten ores.

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for this and the previous year:

	Wolfram.	Scheelite.
1930	65 tons ...	784 tons
1929	44.1 ,, ...	280 ,,

The increased output was due to the enhanced price prevailing during the last two years.

Gold.

The production of gold from the Raub Gold Mines was 24,012 ounces compared with 23,303 ounces in 1929. In addition alluvial gold was recovered in various places to the extent of 5,585 ounces.

Coal.

The production of coal from the Malayan Collieries Ltd., Selangor, was 565,573 tons, a decrease of 95,941 tons compared with the previous year, while consumption was as follows:

Federated Malay States Railways	231,867	tons
Mines	213,288	,,
Other Federated Malay States consumers ...	88,489	,,
Exported	139	,,
Consumed at the Collieries	31,790	,,
Total ...	565,573	,,

Other than the above there is no mine producing coal in the Federated Malay States.

Dredging.

The output from dredges showed a decrease compared with 1929. This was due to voluntary restriction and, in some cases, compulsory stoppage owing to the prevailing low tin price.

The proportion of the total output won by dredges was 38 per cent. as against 38 per cent. in 1929 and 30 per cent. in 1928. At the end of 1930 the number of dredges in use was 99, out of which number 38 had stopped temporarily, the number under construction was 11 and there was none on order.

Gravel pumps.

Gravel pump mining produced 43 per cent. of the total output. The number of such pumps in use at the end of 1930 was 473 as against 618 in 1929 and 667 in 1928.

Thefts of ore.

No reports of thefts of ore from mines were received during the year. This is rather remarkable in view of the amount of unemployment amongst mining coolies due to slump conditions prevailing throughout the year.

Bulletin of Statistics.

The monthly Bulletin of Statistics relating to the mining industry, which is compiled by the Inspector under the Mineral Ores Enactment, has become very popular and there is an increasing demand for it. Subscriptions for the Bulletin are now received from all over the world and the sales exceed 500 copies monthly.

IV.—TRADE AND ECONOMICS.

The aggregate value of trade for 1930 was $381,672,462, a decrease of $168,733,538 or 30.66 per cent. compared with 1929. The decrease may be said to be due entirely to the lower prices of tin and rubber, and the curtailment of the purchasing power which resulted therefrom. The average price of rubber for the year was 19.3 cents per lb. The highest price was reached in February when it averaged 25.7 cents per lb. In October the average price dropped to 11.9 cents per lb. The average price of standard tin for the year was $72.89 per pikul. The peak was reached on 9th January, when it was $91.75 per pikul. On 17th December it dropped to $54.12½ per pikul—the lowest price during the year.

The distribution of trade per head of the population was $222 as compared with $352 in 1929.

The total values of imports and exports (including re-exports, bullion, and parcels post) for the last six years were as follows:

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1925	137,116,207	411,878,610	274,762,403
1926	173,887,724	445,600,203	271,712,479
1927	176,161,194	339,925,603	163,764,409
1928	191,473,471	278,523,482	87,050,011
1929	201,393,405	349,012,595	147,619,190
1930	168,020,418	213,652,044	45,631,626

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years was as follows:

IMPORTS.

Countries from which imported.	1928.	1929.	1930.
Singapore	37.74	35.12	35.25
Penang	16.90	20.47	17.70
Malacca	1.26	1.92	2.33
Unfederated Malay States	1.18	2.07	1.03
United Kingdom	17.69	14.04	16.70
British Possessions	5.50	6.16	7.14
Continent of Europe	5.17	5.42	3.90
Other Foreign Countries	14.56	14.80	15.95
	100%	100%	100%

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1928.	1929.	1930.
Singapore	24.26	23.31	23.29
Penang	36.86	29.48	33.19
Malacca	2.47	1.89	2.97
Unfederated Malay States	.28	.29	.52
United Kingdom	10.69	12.73	13.78
British Possessions	1.06	1.34	.64
United States of America	20.14	25.30	19.78
Other Foreign Countries	4.24	5.66	5.83
	100%	100%	100%

Revenue. The total revenue collected by the Customs, Excise and Chandu Branches of the Trade and Customs Department amounted to $33,919,534, being a decrease of $12,421,905 compared with 1929.

Import duties. Import duties contributed $11,403,064 as against $11,105,912 collected in 1929.

Export duties. Export duties aggregated $10,434,038 as compared with $19,990,300 in 1929—a decrease of $9,556,262.

Excise duties. Excise duties, licences, etc., produced $2,451,016 compared with $2,785,756 in 1929—a decrease of $334,740.

Distilleries. Owing to the trade depression, nothing further has been done in developing improved methods of distilling samsu from rice.

Opium. The net revenue from the Chandu Monopoly was $9,559,299 compared with $12,392,378 in 1929, being a decrease of $2,833,079.

Under minor headings the sum of $72,117 was collected.

Shipping. The total number of vessels, exclusive of native craft, entered and cleared at the various ports of the Federated Malay States, was 13,021 with a tonnage of 8,485,778, shewing a decrease of 169 in number and an increase of 728,178½ in tonnage, compared with the figures for the year 1929.

The number and tonnage of ocean-going steamers entered and cleared at Port Swettenham were 1,484 vessels and 5,902,056 tons as compared with 1,431 vessels and 5,623,425 tons in 1929, being an increase of 278,631 tons.

The number of ocean-going steamers which came alongside the wharf was 333 against 365 in the previous year.

The largest vessel entering the port was s.s. "Achilles" (British) of 11,426 tons, whilst the deepest draft vessel entering the port was s.s. "Philoctetes" (British) drawing 31′ 6″ of water.

COMPANIES.

During the year 32 local companies with a total nominal capital of $7,013,000 were incorporated and registered as compared with 47 companies ($23,602,658) in 1929, 45 companies ($37,665,613) in 1928 and 48 companies ($25,008,570) in 1927.

The largest number of companies registered in recent years was 56 companies ($35,764,500) in 1926 and 54 companies ($38,934,928) in 1920.

The main objects of the new local companies were rubber, tea, coffee planting, etc. (4), mining (4), mining and rubber planting, etc. (3), exchange share brokers and agents (2), printers and publishers of newspapers, etc. (3), general trading (6).

One company for each of the following purposes was formed: hair dressing, etc., finance, electrical engineering and generating, etc., Dreadnaught lights supplies, water transport, theatre and musical entertainment, civil engineering and contracting, financing and dealing in farm products, motors and motor engineering and club.

The number of companies in liquidation in 1930 was 37 and the number of companies wound up during the year was 11. Three companies were struck off the register.

There were 699 companies on the register at the end of the year.

BANKRUPTCY.

During the year 327 bankruptcy notices were issued, 147 bankruptcy petitions were filed, 102 receiving orders and 96 adjudication orders were made.

Of the 96 persons adjudged bankrupt during the year, 49 were Chinese, 30 natives of India, eight Malays, four Ceylonese, two Filippinos, one Japanese, one Burmese and one Eurasian. By occupation, 38 were traders, 17 landowners, eight clerks, seven contractors, four miners, four married women, three bandsmen, two rubber dealers and 13 miscellaneous.

There was a marked increase in the work in the States of Perak, Selangor and Negri Sembilan as compared with the preceding years.

One composition was approved by the Court.

There were two criminal proceedings in bankruptcy.

Eleven applications were made for discharge, of which six were granted.

The gross liabilities and assets as given by the debtors amount to $1,250,197 and $396,400, respectively.

CO-OPERATION.

The statistics relate to the Co-operative year from 1st July, 1929, to 30th June, 1930.

Staff. The Director of Co-operation was in charge of the department throughout the year. One Assistant Director returned from leave and deputation and replaced another Assistant Director, who proceeded to India and Europe to study co-operative organisations. In addition to the Assistant Registrar two other members of the Malayan Civil Service served with the department for part of the year. A Chartered Accountant was appointed to supervise the audit of societies. A Personal Assistant to the Director assumed duty in August, 1929.

Expenditure. The expenditure, inclusive of the salaries of the European staff, for the calendar year 1930, was $202,571.

Progress. The following statistics reveal the position at the end of the Co-operative year:

	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Agricultural Rural Credit Societies ...	70	2,074	90,028	29,809	135,703
Non-Agricultural Thrift and Loan Societies	26	13,809	2,445,473	134,659	2,593,916
Indian Estate Labourers' Societies	58	12,235	188,006	1,421	202,063
Co-operative Rubber Societies	3	185	1,939	27	4,966
Co-operative Union	1	7*	893	700	1,593
Total ...	158	28,303	2,726,339	166,616	2,938,241

* Societies.

Rural credit societies.

The heavy fall in the prices of agricultural products, particularly rubber and coconuts combined with the relative failure of the crop in the main rice-producing area made the year a difficult one for the Rural Credit Societies. Nine were struck off the register during the year. Four hundred and sixty-nine loans amounting to $44,206 were granted, as against 840 loans amounting to $66,910 in the previous year. The total profit earned amounted to $7,437, compared with $12,208 in 1929. Six societies worked at a loss of $262, as compared with a loss of $310 by three societies in 1929. Overdue loans decreased slightly.

Thrift and loan societies.

The number of Thrift and Loan societies remained the same as last year, while the membership decreased from 14,120 to 13,809. The chief cause of this reduction is the adoption by most societies of a policy, which restricts membership to one society. The total paid-up subscriptions increased from $2,124,745 to $2,445,473, and the reserve funds from $88,120 to $134,659. Five thousand six hundred and forty-two loans were granted during the year amounting to $1,464,785 as compared with 5,066 loans amounting to $1,428,519 in 1929. Money invested in gilt-edged securities or held on fixed deposit or in cash in banks totalled $1,516,803 as compared with $1,250,665 on 30th June, 1929. These societies took nearly ten per cent. of the Singapore Municipal Debentures ($2,000,000) issued during the year. The gross average savings of members in these societies rose from $154 to $177, and the net average savings from $67 to $91.

Indian estate labourers' societies.

Thrift societies amongst Indian estate labourers have proved popular and 23 new societies were organised during the year, bringing the total to 56 societies with a paid-up capital of $188,006. In addition there were two Investment Unions. The membership rose from 7,104 to 12,235. The savings average $15 a member, or rather more than a month's wages at 45 cents a day. The membership started to decrease towards the end of the year owing to the very general discharge of Indian labourers brought about by the fall in the price of rubber.

Co-operative rubber societies.

The same cause delayed the progress of the three Co-operative Rubber Societies, as the members found it increasingly difficult to pay up the requisite share capital. One society, however, made a start with the assistance of $3,000 borrowed from an Urban Society. By the end of the year, a factory and smoke-house had been built and fitted with all necessary equipment. The other two registered societies awaited the results of the first experiment and slowly collected share capital to the total of $1,373. It is clear from the enquiries made that if the first societies prove successful, the demand for such societies will be large.

Film propaganda.

Two films were displayed for Malay and Indian audiences respectively. Their purpose was to represent the rewards of thrift and the penalties of extravagance. At the end of the year a rural lecture caravan, which will be operated jointly by the Rubber Research Institute, the Agricultural Department, and the Co-operative Societies Department, was under construction by the coach-building department of the Railway.

General.

The Co-operation Board met twice during the year. One Staff Conference and one Conference of Delegates of Rural Societies were held in Kuala Lumpur. The latter was opened by His Highness the Sultan of Selangor, and coincided with the Malayan Agri-Horticultural Association's Exhibition. Lectures on exhibits were given to representatives of societies from all parts of the country.

V.—COMMUNICATIONS.

POSTS AND TELEGRAPHS.

Postal.

There are now 109 post offices, and 70 places at which postal business is transacted by railway station-masters and others acting as postal agents. The estimated number of articles posted and delivered in 1930 was over forty millions.

Money orders.

Money orders numbering 381,110 were issued and paid, the total representing $16,080,793, a decrease of 18,375 in number and of $3,823,643 in value. Telegraph money orders numbering 14,538 for $1,123,740 were issued and paid.

Savings Bank.

The number of Savings Bank depositors on the 31st December, 1930, was 44,980, an increase of 1,934 during the year. The average amount standing to the credit of the depositors was $100 as compared with $106 in 1929. Withdrawals exceeded deposits during the year by $158,533. The number of Malay depositors increased from 9,429 to 10,659.

Telegraphs.

The number of telegrams despatched and delivered was 795,904, a decrease of 105,837. A new telegraph circuit was opened between Kuala Lumpur and Bentong. This circuit furnishes direct communication between the two offices and provides an alternative route between Selangor and Pahang.

Telephones.

The number of direct exchange lines connected to the telephone system at the 31st December, 1930, was 5,181, an increase of 106 as compared with 1929. There were also 2,617 miscellaneous circuits, such as extension lines, extension bells, private lines, private bell or alarm circuit and tell-tale clock circuits maintained by the department, an increase of 214. On the 31st December, there were 3,119 miles of telegraph and telephone lines, and 25,491 miles of overhead wires, of which 22,265 miles were telephone wires. In addition there were 148 miles of underground cable, the length of single wire in the cable being 13,292 miles. These figures do not include railway wires, nor the 122 miles of line (852 miles of wire) owned and maintained by the department in Johore. One new telephone exchange was opened during the year at Bagan Datoh. Many new trunk and junction lines were constructed or reconstructed during the year to meet the traffic and to improve the service.

The installation of the new automatic exchange for Kuala Lumpur was commenced by Messrs. Ericcsons Telephone Manufacturing Company Limited on the 3rd of July, and was nearing completion at the end of the year.

The question of utilising automatic exchange equipment in rural areas has continued to occupy attention during the year, and two additional "Rural Automatic Units" have been ordered for trial under service conditions—one at the Gap and one at Temerloh.

The scheme under consideration in 1929 for the provision of "Carrier Current" speech channels between Singapore and Kuala Lumpur, Singapore and Bukit Mertajam, Kuala Lumpur and Bukit Mertajam, and Ipoh and Bukit Mertajam (to which has been added a single channel system between Singapore and Tampin) was authorised by the Straits Settlements and Federated Malay States Governments. A contract for the necessary equipment was placed with Messrs. Standard Telephones and Cables Limited of London on the 24th of May; and the contractors had commenced installation by the end of the year.

Financial.

The nett revenue collected was $3,133,618, a decrease of $66,037 compared with the previous year. Annually recurrent expenditure amounted to $2,588,127, and special expenditure (including loan account) to $1,071,832. The value of services performed free of charge for other Government departments is not included in these figures, which also exclude temporary and acting allowances amounting to $246,277.

Wireless.

A low-power short-wave Marconi type ZSB 2 station was installed at the Post Office at Sungei Lembing in Pahang and was opened for traffic on the 1st of November. A regular service is maintained with the Petaling Hill Station in Kuala Lumpur.

All the Trengganu telegraph traffic is now disposed of by wireless between Petaling Hill and Kuantan; and the Petaling Hill Station provided a Broadcast service during the year of three transmissions a week, averaging two hours a transmission.

The wireless station at Kuantan was greatly improved during the year. This station in addition to its ordinary work listens in on long-wave for air-craft signals when advised of flights on the east coast.

Two Marconi ½ kw. type XMD 1 sets were sold to the Kedah Government and installed at Alor Star and Pulau Langkawi. The service was opened in July and is reported to be satisfactory.

Air mails.

The air mail service to Europe via Karachi continued to operate throughout the year; and in February its scope was extended to include correspondence for Egypt, Palestine and Iraq. During the operation of the summer time-table this service offered an acceleration of three to four days compared with the ordinary mail; but during the operation of the winter time-table, little acceleration resulted and indeed the air mail has at times taken longer to reach London than the ordinary mail. It is feared that this service has been somewhat disappointing in so far as Malaya is concerned.

A weekly air mail service between Singapore, Palembang and Batavia was inaugurated in February. This service has continued to operate successfully and regularly throughout the year. Advantage was taken to include in this air mail correspondence from the Federated Malay States.

A new fortnightly air mail to Europe was commenced in October by utilising the Dutch service from Medan to Amsterdam, the necessary connection being made via Penang or Singapore. The time of transmission is approximately 15 days from Kuala Lumpur to Amsterdam.

RAILWAYS.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying the railway and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the West Coast and the East Coast lines.

The West Coast line runs north-north-west through Negri Sembilan, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang harbour about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on the 1st July, 1918, the distance between Singapore and Bangkok being 1,194 miles.

The East Coast line proceeds northward from Gemas through Negri Sembilan and Pahang towards Tumpat, in Kelantan. It is completed and opened for traffic as far as Gua Musang Station, 58 miles beyond Kuala Lipis, the capital of Pahang, 200 miles from Gemas and 337 miles from Singapore. Gua Musang is the first station in Kelantan territory and is about 12 miles from the Pahang frontier. At the other end a section of 81 miles extending from Tumpat—the port of Kelantan—to Kuala Gris has been completed and opened for traffic. This line when extended southward will meet the line from Gemas and provide through direct communication with Singapore from Kelantan. A branch line, 13 miles long, has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam started on 1st November, 1921.

Branch lines connect the main line with ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld.

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak, Kuang-Batang Berjuntai, 14 miles, Kuala Lumpur-Batu Caves, 8 miles, Sungei Besi-Sultan Street, 8 miles, Sultan Street-Ampang, 6 miles, Connaught Bridge Junction-Kuala Selangor, 30 miles, all in Selangor, and Bahau-Kuala Pilah, 13 miles, in Negri Sembilan.

The branch lines from Seremban to Port Dickson and from Kuala Kubu Road to Kuala Kubu were closed for passenger traffic, as the revenue obtained did not justify the retention of the passenger train services.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,071 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are provided with restaurant cars and sleeping saloons of a high standard.

There are 247 permanent stations and 45 flag stations.

Financial.

The expenditure on capital account (including lines not yet open for traffic) was $231,548,839 up to 31st December, 1930, of which $184,591,856 was met from Revenue Advances and $46,956,983 from Loan Funds.

The receipts in 1930 from all sources were $19,272,903, a decrease of 17.40 per cent. Expenditure chargeable to revenue (excluding Renewals and Betterment Fund Contribution) amounted to $15,326,016, a decrease of 5.18 per cent. The balance of receipts amounting to $3,946,887 has been transferred to the Renewals and Betterment Fund. This appropriation is less than the budgetted contribution of $4,733,464 by $786,577.

Capital expenditure.

During the year the nett expenditure on capital account was $7,133,374 as compared with $5,264,788 in 1929.

Renewals and Betterment Fund.

The expenditure met from the Renewals and Betterment Fund during the year amounted to $4,904,391 compared with $3,664,386 in 1929. The balance standing to the credit of the Fund at 31st December, 1930, was $10,012,251, the corresponding figure at 31st December, 1929, being $10,733,538.

Passenger train traffic.

The receipts from passenger train traffic amounted to $7,977,885 compared with $9,381,145 in 1929, a decrease of $1,403,260 (14.96 per cent.).

The receipts from goods train traffic amounted to $8,790,022 compared with $11,223,489 in 1929, a decrease of $2,433,467 (21.68 per cent.). Goods train traffic.

The revenue returns for the year reflect the continued slump conditions and intense competition.

In order to meet extensive competition many special rates were quoted chiefly on foodstuffs and rubber. Rates.

The system of train control introduced in January, 1922, has proved very satisfactory in controlling the movement of rolling stock, checking unnecessary haulage, and, in case of breaches on the line, expeditiously restoring communication. The system now controls the main line between Prai and Gemas (351 miles) and there is direct telephone communication to Kluang, Johore Bahru and Singapore (Tank Road) stations. Train control.

On the 12th September, 1930, the northern and southern railheads were linked up, thus completing the platelaying of the East Coast Railway. The length of line under construction is 46½ miles, and in this section the work is of a very heavy nature including five tunnels aggregating 4,366 lineal feet, all of which have been completed. Good progress has been made during the year under review and it is anticipated that the line will be ready for traffic by September, 1931. Construction.

A preliminary survey with the object of obtaining a route across the main range to connect Kuala Lumpur with the East Coast line was undertaken during the year and a route crossing Ginting Peras (20 miles east of Kuala Lumpur) has been found. The total length of the line will approximate 80 miles, 65 miles of survey having been completed.

Good progress has been made on the deviation of the railway between Bukit Timah and Tanjong Pagar (Singapore). The earthwork at the end of the year was well advanced and all culverts completed. Several reinforced concrete bridges and the abutments for three steel bridges were completed. A contract was let for the Singapore New Terminal Station and satisfactory progress has been made. The foundations for the inwards and outwards goods sheds and carriage and engine sheds were well advanced. The drainage of the yard which involved important stream diversions and the construction of large reinforced concrete culverts was carried out and good progress made on all other works. The whole of the land required for this deviation was acquired during the year.

Other works. A programme was started in 1925 to provide 80 lb. rails throughout for the main line and Port Swettenham branch line. One hundred and seventy-two and half miles of relaying were involved and the work was completed in November, 1930.

A housing scheme for the railway subordinate artisan and lower subordinate staff estimated to cost $4,765,800 was commenced in 1926 and at the end of the year, 1,491 units had been completed and 141 units were in hand. The settlements at Sentul and Bungsar Road near Kuala Lumpur comprise the main portion of the scheme.

Railway Board. The Railway Board held 11 meetings during the year. It is composed of three official and six unofficial members. Of the unofficials, two were appointed from the Colony, one residing in Singapore and the other in Penang.

Roads.

The total mileage of roads at the beginning of the year was 2,734 miles 27 chains, the cost of upkeep averaging $1,241 per mile. During the year 45 miles 35 chains were added bringing the total mileage at the close of the year to 2,779 miles 62 chains. The policy of raising, widening and straightening main roads, treating their surfaces with bituminous material and replacing temporary by permanent bridges was continued.

The pontoon bridges over the Perak River at Enggor and at Blanja were kept open to traffic without interruption throughout the year. The Enggor Pontoon Bridge, which is now over 39 years old, carried between the hours of 6 a.m. and 6 p.m. 93,000 motor cars and 17,250 lorries during the year, while the total numbers that crossed the Blanja Pontoon Bridge were 79,962 and 16,637, respectively.

Fair progress was made on the construction of the New Enggor Bridge considering the difficulties encountered in the foundations of two piers, and progress from now on should be normal.

The new Petaling Bridge which carries the Petaling Road over the new Klang River Deviation below Kuala Lumpur was completed at a cost of $97,178. This bridge is of reinforced concrete of the bowstring type, and has a clear span of 148 feet with a carriage way 40 feet wide and a side walk five feet in width on either side.

Very little flooding occurred during the year although there were heavy rains in October. Some flooding took place near Kuala Dipang on the main road and further south; this was subsequently remedied by road raising. The Batu Gajah-Gopeng Road was under water for 10 days during October, but with the completion of the raising of this road, no further trouble should be experienced.

The total expenditure under "Special Services, Roads, Streets and Bridges" during the year was $3,204,442.

VI.—POLICE AND PRISONS.

Police.

Crime.

The year 1930 was an extremely difficult one for the Police. The serious slump conditions which prevailed at the end of 1929 not only continued, but grew steadily worse. Large numbers of mining coolies and rubber tappers were thrown out of employment and there were no other important industries in which the unemployed could be readily absorbed. The depression in the two staple industries of the country not only affected the actual workers, but seriously affected also the classes who were dependent for their livelihood on the custom of mining and planting coolies.

Generally speaking, the attitude of the heavily hit Chinese cooly class has been praiseworthy. Where work was to be found they accepted it gladly even on greatly reduced wages, and no attempt was made by persons of this class to participate in outbreaks of any kind and their general attitude has been extremely law-abiding.

Numbers of persons, however, who failed to obtain employment resorted to crime as a means of obtaining their livelihood and cases of theft, house-breaking, robbery and gang-robbery increased to such an extent in nearly all parts of the country as to tax to the utmost the ability of the police to devise adequate preventive measures and to investigate fully the offences reported. The best efforts of the Police could not possibly prevent a large increase in crime, but it is certain that had the Police in all States not been extremely vigilant and active, the increase, great as it is, would have been very much greater, and life and property have been nowhere safe.

The total number of reports was 88,015 compared with 94,943 in 1929.

The total number of seizable offences reported was 9,052 as against 8,179 in 1929 and an average of 6,696 for the years 1925 to 1929, inclusive. The year's total of serious crime which includes murder, gang-robbery and robbery was 358 compared with 160 in the previous year.

The actual strength of the Force on the 31st December was 4,384 officers and men distributed in 42 District Head-quarter Stations, 167 minor Police Stations and 17 Police Posts.

At the close of the year the Force was eight Gazetted Officers, ten British Inspectors and 23 Subordinate Police Officers and Constables short of the approved strength. A large percentage of the officers are still on probation and many of the districts are in charge of officers with comparatively short police experience.

During the early part of the year Malay recruitment was unsatisfactory, but as small cultivators found it unprofitable to work their holdings and as rubber tappers found themselves out of employment, the number of Malays offering for recruitment steadily increased. Towards the end of the year it was found possible to raise the standard appreciably and to pick and choose from the candidates offering. So satisfactory had recruitment of Malays become that it was decided for the time being to increase the Malay Contingent at the expense of the Indian Contingent.

A number of the Indian recruits offering for enlistment were possessed of a fair English education but many of these were of rather poor physique.

The training in drill and musketry was continued satisfactorily on the same lines as in previous years. A considerable advance has been made in the instruction of recruits in law and police duties and general educational subjects. The Indians are showing great promise in acquiring a knowledge of Romanised Malay.

For the fourth year in succession the Police trained and entered a team for the Warren Shield. The team, which was trained and led by Mr. Andrews, Acting Assistant Commissioner of Police, succeeded in taking second place for the second year in succession.

Co-operative Society.

The Federated Malay States Police Co-operative Thrift and Loan Society had a membership at the end of December of 2,391. The subscriptions amounted to $60,764.44; the loans granted by the Society totalled $19,502 in respect of 263 loans. The investments include:

Five per cent. War Loan 1929-47 £5,900 at cost $52,299.87.

Five per cent. Singapore Municipal Debenture Stock 1916 $17,000 at cost of $18,107.66.

The machinery for dealing with loans which was found to be inadequate during the course of the year has been brought up to date and the Society is now functioning smoothly.

Detective Branch.

The Detective Branches consist of

Perak—

1 Assistant Commissioner of Police;

1 Detective Sub-Inspector and 94 Detectives of lower grades.

Selangor—

1 Assistant Commissioner of Police;

1 Asiatic Inspector;

1 Detective Sub-Inspector and 58 Detectives of lower grades.

Negri Sembilan—

1 British Inspector and 24 Detectives of lower grades.

Pahang—

15 Detectives of various grades;

with 3 Asiatic Inspectors and 4 Detectives of lower grades under the charge of the Director, Criminal Intelligence, and 51 Probationary Detectives in training at the Depôt and other Contingents.

Very good work was done by the branches during the year, a number of men having over 50 cases each to their credit, the average per man being 17.4 in Perak, 21.9 in Selangor, 13.7 in Negri Sembilan and 13.46 in Pahang.

The Traffic Branches in Perak, Selangor and Negri Sembilan functioned satisfactorily during the year and very useful work has been accomplished. The work thrown on these branches by increase in traffic in the larger centres is very great and is almost more than the present staff can successfully cope with. Considerable work has also been thrown on Officers Superintending Police Circles and on Officers-in-charge of Police Districts in certain districts in connection with the testing of applicants for certificates of competency as drivers.

Criminal Registry.

The work in the Criminal Registry during the year was very heavy and the registration effected in respect of first offenders constitutes a record since the formation of the Registry. The total of new registrations for the year was 12,400, an increase of 875 on the previous highest total in 1929.

The revenue collected by the department for the year amounted to $377,363 compared with $374,897 in 1929.

PRISONS.

General.

There are six prisons in the Federated Malay States. On the 1st January they contained 1,086 prisoners against 1,092 on the 1st January, 1929; 7,556 were admitted and 1,384 remained at the close of the year. The daily average figures were: Civil Prison, 177; short sentence and revenue grade, 545; long sentence and condemned, 446. Five executions were carried out. Two prisoners escaped. No prisoners committed suicide. The daily average of sick was 1.69 compared with 1.56 in 1929. There were 19 deaths, of which one was from malaria, two from phthisis, one from pneumonia, one from apoplexy, one from cerebral haemorrhage, two from heart disease and eleven from other causes.

Expenditure.

The total expenditure of the department was $508,522. The daily average of 1,168 prisoners was maintained at a net cost of $453,684, giving an annual cost per head of $388. The annual cost in 1929 was $369 and in 1928, $371.

VII.—PUBLIC WORKS.

Expenditure.

The expenditure of the department was $18,584,937 against an authorised provision of $20,418,252, the unexpended balance of $1,833,315 being accounted for as follows:

Annually Recurrent	$ 562,697
Other Charges, Special Expenditure ...	107,140
Special Services	1,163,478

The value of work carried out for other departments and private individuals amounted to $1,057,324, which added to the above figure of $18,584,937 gives a total expenditure for the year of $19,642,261.

The percentage of cost of establishment to total expenditure was:

	Per cent.
Civil Engineers and Architects	5.2
Technical Subordinates	2.3
Overseers under Schemes	1.0
Overseers and Sub-Overseers on Open Vote ...	.6
Store and Depôt Keepers	.4
Clerical (excluding Financial)	1.3
Financial Staff	.5
Total ...	11.3

The revenue earned during the year amounted to $1,946,737.

The number of separate items for which provision was made under Special Services was 825, every one of which was put in hand during the year; 756 items (91.63 per cent.) being completed.

The total expenditure of $18,584,937 was made up as under:

Annually Recurrent	$8,691,863
Other Charges, Special Expenditure ..	224,170
Special Services	9,668,904

The corresponding figures for 1929 were:

Annually Recurrent	8,844,050
Other Charges, Special Expenditure ...	73,038
Special Services	14,993,446

being a decrease of $5,325,597 in 1930.

On the other hand the percentage of expenditure to authorised provision in 1930 under these headings was:

	Per cent.
Annually Recurrent	93.92
Other Charges, Special Expenditure	67.66
Special Services	89.26

as against 90.98 per cent., 77.37 per cent., 80.88 per cent., respectively, in 1928 and 91.66 per cent., 81.01 per cent. and 84.08 per cent. in 1929.

All public services such as roads, waterworks and Government offices were upkept at a high standard as also were quarters, senior and subordinate.

Building and construction prices had a pronounced downward tendency, increasing as the year advanced owing to keen competition as the result of despondency in the tin market and especially so in respect of the rubber market. Quotations for constructional work at the close of the year were more favourable than for some ten years past.

The measures put in hand for the prevention and mitigation of floods in Ipoh and Kuala Lumpur continued throughout the year—those in Ipoh being at the close of the year far in advance of similar work in Kuala Lumpur. Ipoh experienced conditions at one period, which had they obtained previous to the putting in hand of mitigation measures would have caused serious floods with considerable loss and inconvenience. It can now be definitely stated that, as soon as the Sungei Choh deviation down the Pinji Valley has been completed, and this is expected to take place during the first half of 1931, Ipoh need not fear any further damage from normal floods so long as the channels recently constructed are efficiently upkept.

ELECTRICAL SUPPLY.

General. Although the acute trade depression, which prevailed throughout the country during 1930, has largely affected the development of the electrical industry, considerable expansion can be recorded.

Revenue. During the second half of the year several large dredging companies decided to close down their plants voluntarily, and many Chinese mines were compelled to cease work as they could no longer produce at a profit. These adverse conditions had a direct effect upon the revenue of the Electrical Department, but early in the year they were foreseen and vigorous efforts were made to offset the anticipated reduction of revenue by the extension of power supply for lighting and domestic purposes, particularly in small townships. A uniform lighting charge of 20 cents per unit was introduced throughout the Federated Malay States as from 1st July, 1930. The introduction of this reduced rate affected the revenue in Taiping, Seremban, Klang and Port Swettenham, to the extent of 20 per cent. The revenue, however, is gradually recovering due to increased consumption. The total revenue of the department increased from $2,238,078 in 1929 to $2,456,743 in 1930, an increase of $218,665.

Capacity and output. The total capacity of plant installed for the generation of electricity in the Federated Malay States during 1930 was 116,689 kilowatts, compared with 75,426 kilowatts in 1929; 65,162 kilowatts in 1928; 42,445 kilowatts in 1927, and 29,477 kilowatts in 1926. The total number of units generated by the above plant in 1930 was 219,034,051 units, compared with 198,761,828 in 1929. Of these units 28,031,935 were generated by Government undertakings, and the balance of 191,002,116 units by private undertakings. The figure for Government undertakings for 1930 was only 23,206 units in excess of the 1929 output, but this is accounted for by the fact that the entire load of the Ipoh Power Station was transferred to the Perak River Hydro-Electric Power Co. Ltd., and that 3,295,500 units were purchased from the company throughout the year.

It will be seen, therefore, that while the output of Government plant has remained stationary compared with 1929, the output from private undertakings has increased by 11.8 per cent.

Accidents.

Nine accidents were reported and investigated during the year. Of these, five proved fatal. A Court of Enquiry was held in each case.

Technical instruction.

Technical classes at the beginning of the year were held at Kuala Lumpur, Seremban and Taiping, but in May all departmental technical training was centred in Kuala Lumpur. Practical instruction was given to apprentices in the field and the results of the examinations held were in general satisfactory.

Inspections and examinations.

One thousand two hundred and thirteen inspections were made under the Electricity Enactment as compared with 711 in the previous year. Five hundred and sixteen candidates were examined for the granting of certificates as Electrical Engineer, Chargemen and Wiremen.

VIII.—PUBLIC HEALTH.

Population.

The census to be made in 1931 will demonstrate to what extent reliance can be placed on the statistical methods employed in estimating population on the basis of the last intercensal increase.

Until this present report the calculation of the increase in population has been made on an arithmetical basis, the annual increase during the intercensal period having been taken as a constant figure. The figures in this report have for the first time been calculated on a geometrical basis; with the result that the estimate of the total population for 1930 is higher by nearly 132,000 than the figure which would have been arrived at by the previous method. Hence estimated birth and death-rates for 1930 both appear lower than would otherwise have been the case, and cannot be strictly compared with those shown in previous reports. All comparative tables in this present report have, however, been drawn up on the geometrical basis.

Estimated by race and by State on a geometrical basis, the figure for the population of the Federated Malay States for mid-year 1930 is 1,722,941—an increase of 51,239 over that for the previous year.

The details are as follows:

State.	1929.	1930.	Increase.
Perak	723,873	742,237	18,364
Selangor	533,631	553,464	19,833
Negri Sembilan	240,051	249,285	9,234
Pahang	174,147	177,955	3,808
	1,671,702	1,722,941	51,239

The distribution by race is given below:

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.
Perak	283,365	231,636	221,265	2,917	3,054
Selangor	126,388	191,283	227,063	4,315	4,415
Negri Sembilan	85,753	100,409	59,295	1,868	1,960
Pahang	118,607	46,685	11,196	535	932
Total	614,113	570,013	518,819	9,635	10,361

Births.

Sixty-two thousand eight hundred and thirty-nine births were registered during 1930, as compared with 54,172 in 1929, the birth-rates for the two years being 36.5 and 32.4, respectively.

The racial distribution of births is illustrated in the following table:

Race.	No. of births.	Birth-rate.
Malays	24,239	39.5
Chinese	23,286	40.9
Indians	14,473	27.9
Non-Asiatics	141	14.6
Others	700	67.6

Deaths.

Forty-one thousand five hundred and ninety-four deaths were registered, as compared with 41,203 in 1929. If the same method of estimating the total population had been adopted this year as last year, the death-rate would have been reported as 26.1, as compared with 26.4 reported last year. By the method of calculation now adopted the death-rate for 1930 is 24.1, as compared with 24.6 for 1929.

The distribution of deaths by race is as follows:

Race.	No. of deaths.	Death-rate.
Malays	12,544	20.4
Chinese	17,306	30.4
Indians	11,324	21.8
Non-Asiatics	44	4.6
Others	376	36.3

The following are among the principal causes of death in the Federation:

State.	Malaria including fever of undefined origin.			Dysentery and diarrhoea.			Pulmonary tuberculosis.		
	Deaths.	Rate.		Deaths.	Rate.		Deaths.	Rate.	
		1929.	1930.		1929.	1930.		1929.	1930.
Perak ...	7,513	11.6	10.1	703	1.1	0.9	745	1.3	1.0
Selangor ...	4,316	8.9	7.8	1,118	2.1	2.0	739	1.7	1.3
N. Sembilan ...	2,612	10.5	10.5	407	1.4	1.6	322	1.4	1.3
Pahang ...	2,280	13.1	12.8	212	0.7	1.2	324	0.6	1.8
Total ...	16,721	10.9	9.7	2,440	1.4	1.4	2,130	1.3	1.2

Infant mortality.

Deaths in infants under one year of age in 1930 numbered 10,227 compared with 9,618 in the previous year, the rates being 163 and 178, respectively.

The distribution by State is shown below:

State.	Deaths of infants under one year.	Death-rate per 1,000 births.	
		1929.	1930.
Perak	3,924	155	144
Selangor ...	3,405	179	162
Negri Sembilan	1,661	202	202
Pahang ...	1,237	245	196
Total ...	10,227	178	163

General Remarks.

In spite of the economic depression the state of the public health of the Federated Malay States was on the whole satisfactory during 1930.

The birth-rate of 36.5 per thousand living persons for the whole Federation constituted a record.

Excluding the year 1926 (when records for Pahang were lost in the floods) the birth-rate for 1930 was 8.4 per mille above the mean for the nine yearly periods 1921-1930.

The natural increase of births over deaths reached the satisfactory figure of 21,245, representing a 1.2 per cent. natural increase of the total population for the year.

Comparing the three principal races, the birth-rate was highest amongst the Chinese (40.9) closely followed by the Malays (39.5), while that amongst the Indian population was 27.9.

The death-rate of 24.1 per thousand of all races was lower than for the previous three years, but was slightly higher than the rates for 1924 and 1925.

Leaving out of account the rate for 1926, which was not a true rate for the reason given above, that for 1930 was 0.5 per mille below the mean for the decennial period.

Taking the three principal races in the Federated Malay States, the death-rate was highest in the Chinese (30.4), lowest in Malays (20.4), and but slightly higher in Indians (21.8): these last two figures are the lowest yet recorded for these races.

The death-rate for the non-Asiatic population was 4.6, only 44 deaths occurring among this small section of the community.

Loss of life among infants showed a reduction from 178 per thousand in 1929 to 163 for the year under review.

PRINCIPAL DISEASES.

Malaria.

Judging from the number of cases treated in hospitals and from the number of deaths reported as due to "malaria, including fever", the incidence of the disease in 1930 was much the same as in the previous year. The registered deaths numbered 16,721, as compared with 16,968 in 1929. Admissions to Government hospitals numbered 36,647, with 1,915 deaths, compared with 35,306 admissions and 1,795 deaths in 1929. It will be recalled that the incidence of malaria in 1929 showed a decrease in the neighbourhood of 25 per cent. from the previous two years: it now appears that the improved state of affairs has continued from 1929 to 1930.

In making deductions on the incidence of malaria—as of other diseases—from deaths recorded in the past year, it must be remembered that the trade depression led to a reduction in the number of immigrant labourers employed on estates, and to the repatriation to India of many thousands. It goes without saying that estate labourers whose health had been unsatisfactory were the first to be discharged and repatriated. It follows that improvement in health statistics must be accepted with certain reservations.

Pneumonia.

Pneumonia continues to be a most deadly disease. There were 2,834 cases admitted to hospital, of which 1,363, or more than 48 per cent., were fatal. The total number of deaths registered as due to diseases of the respiratory system other than tuberculosis was 3,182.

Pulmonary tuberculosis.

The total number of reported deaths due to pulmonary tuberculosis was 2,130, which is slightly in excess of the figure of 2,000, mentioned in previous reports as the average figure for past years. The number of admissions to hospital was 2,109, which is not much higher than the year before (2,012); while the deaths in hospital were 1,060, which again is very near the previous figure of 1,078. It can be stated again that there is nothing in the statistics to indicate any rapid increase in the disease.

Dysentery.

The number of deaths reported under the heading of "dysentery and diarrhoea" was 2,061, compared with 2,194 for 1929. Dysentery cases in Government hospitals numbered 2,861, with 633 deaths.

Smallpox.

Smallpox appeared in a mild form in the Kinta district of Perak; 22 cases, with two deaths, were reported. One other case was reported from among immigrant Indian labourers in the Quarantine Camp at Port Swettenham. Intensive vaccination campaigns were instituted, in Perak and elsewhere, and 217,770 vaccinations carried out.

Cholera and plague.

It is satisfactory to be able to state that no case of either cholera or plague occurred.

Tropical typhus.

Tropical typhus still causes anxiety, for, while the number of reported cases remained as high as in 1929, the mortality was much heavier.

Close investigation has been continued with a view to incriminating the particular vector of the disease; its association with rats would seem to have been established.

Cerebro-spinal meningitis.

Cases of cerebro-spinal meningitis occurred among immigrant coolies at the Quarantine Camp, while there were a few scattered cases on estates. The total number reported was 22, with 18 deaths.

Leprosy.

The number of cases of leprosy detected and segregated during the year was over three hundred. This is an increase of about fifty over the average of recent years.

Yaws.

The number of cases of yaws treated at hospitals was 4,238.

Venereal diseases.

For the first time since the inception of the campaign against venereal disease in 1925, the yearly total of patients treated at the Government clinics shows a reduction. The number for 1930 was 35,734, a reduction of over five thousand from the 1929 figure of 40,802. This reduction may be explained, partly at least, by the decrease in the numbers of immigrant Indians and Chinese.

Systematic propaganda and educational work was continued: many lectures were delivered, demonstrations were given at agricultural shows, and pamphlets in all languages distributed. There are 59 centres for free treatment of venereal disease.

During the course of the year the number of recognised brothels was being steadily reduced. It may be significant that the number of patients treated at clinics during the second half of the year was less by 3,742 than the number during the first half, the figures for the two six monthly periods being 19,738 and 15,996.

Beri-beri.

Cases of beri-beri admitted to hospitals were about two hundred in excess of the 1929 figure (1,843 compared with 1,640).

In last year's report attention was called to a satisfactory progressive decrease in the disease; the increased number of cases in 1930 was only to be expected, as the result of economic conditions interfering with the proper nourishment of the poorer classes, the full effect of which may not be apparent as yet.

INFANT WELFARE WORK.

Expansion of work.

A new Infant Welfare Centre has been opened at Teluk Anson. At all centres an attempt is being made to reduce the amount of ordinary clinical out-patient work, and concentrate more on the proper preventive work of educating mothers, a step which is practicable now that the centres are so well known and attended.

General.

Visiting by Lady Medical Officers and Health Sisters in Malay kampongs received special attention. A start was made with the system of introducing voluntary workers, European and Asiatic, into the centres; there are great possibilities of developing useful work on these lines, and all that is required is public support.

Efforts were made during the year to bring practising midwives into association with the centres, so that their work should be kept up to the requisite standard.

INSPECTION OF SCHOOLS.

Reorganisation of work.

The school medical service was reorganized during the year. Previously school inspection was carried out by the staff of both the Medical and the Health Branch of the department. This dual control was not conducive to satisfactory work, and resulted in a certain amount of overlapping. It has now been possible to organize the work entirely under the Health Branch on a more satisfactory basis.

The two Lady Medical Inspectors of Schools continued to carry out medical inspections of girls' schools, and of schools consisting of children of both sexes of the kindergarten and younger classes. Other schools were visited by Assistant Medical Officers.

One thousand and fifty-six schools were visited, and 58,554 children examined. The principal defects discovered among the children included the following: dental caries, 23,987; enlarged glands, 4,772; tonsillar diseases, 3,707; skin diseases other than scabies, 3,269; eye diseases, 2,087; defective vision, 1,890; malnutrition, 1,314.

Dental treatment.

In connexion with dental defects, the Dental Surgeon continued to carry out valuable curative and preventative work. Operative work included 7,871 examinations, 3,083 extractions, 2,108 treatments, 1,391 fillings, 623 administrations of gas anaesthesia, 288 dressings and 147 scalings. Owing to shortage of staff it was not possible for scholars in Pahang to be examined for dental treatment. In the three remaining States the average percentage of children with dental defects was 77.9, the percentage rate varying between 88.0 in the coastal belt, 82.6 in urban areas and 72.8 in rural areas. Extensive propaganda on dietetics and the care of the teeth was carried on by the Dental Surgeon, both in schools and by means of public lectures. Health talks to teachers and to senior scholars formed an integral part of the school medical service. Efforts were made to improve the hygienic aspect of schools and their surroundings, and improvements to buildings, sanitary annexes, water supplies, etc., were carried out as far as funds permitted.

PUBLIC HEALTH EDUCATION.

Health exhibits.

Public health propaganda included health exhibits at the various agricultural shows. A permanent building was erected in the Exhibition grounds at Kuala Lumpur, where the opportunity was taken to stage a very successful health exhibition. A highly successful Health Week was held at Ipoh during the year. This is the first venture of the kind to be attempted in the Federated Malay States; its success was gratifying not only on account of the immediate results, but also as a promise of further successful efforts of a similar nature.

Educational films.

Educational cinematograph films were prepared during the year. The subjects selected were infant welfare and pulmonary tuberculosis. The pictures of Malay and Chinese family life were all obtained locally, and this local colour makes the films peculiarly attractive for the people intended to be reached. Health Inspectors have been trained for the work of showing these films in kampongs and towns, and stories illustrating other health subjects will be added to the list as soon as they can be completed.

QUARANTINE AND PORT HEALTH WORK.

General.

The work at Port Swettenham was lightened during the latter half of the year by the virtual cessation of recruiting of Indian immigrant labour. Whereas 60,761 immigrants and deck passengers were dealt with during 1929, there were only 33,090 in 1930.

Assistance was given to the Labour Department, during the reduction of labour on estates in the autumn, by accommodating in the Quarantine Camp at Port Swettenham 15,823 labourers and their dependents, pending their repatriation to India. As a result large numbers of patients, in all 1,612, were treated in the Camp hospital.

HOSPITALS AND OTHER INSTITUTIONS.

Hospital in-patients.

The number of in-patients admitted to Government hospitals during the year was 115,908, with 9,825 deaths, corresponding with 113,647 patients and 9,756 deaths for the previous year. The number of major surgical operations performed was 1,765, compared with 1,671 in 1929.

Dispensaries and out-patients.

The number of out-patients treated at all hospitals, dispensaries, travelling dispensaries and dispensary boats in 1930 was reported as 636,849, compared with 878,158 in 1929: the apparent decrease is due to an improved system of recording cases.

Central Mental Hospital. At the end of the year there were 1,987 male and 601 female patients at the Central Mental Hospital. Admissions during the year numbered 971, and discharges 484. There were 197 deaths.

Leper Settlement. The new Leper Settlement at Sungei Buloh was opened in August, and the patients previously accommodated in Kuala Lumpur were transferred there. This new institution is admirably suited for its purpose, and compares favourably with any of its kind in the world. It will afford the opportunity, for the first time, for carrying out the treatment of leprosy on satisfactory lines. The number of lepers in the Settlement at the end of the year was 1,085.

Decrepit Settlement. Simultaneously with the opening of the Leper Settlement, the new Decrepit Settlement at Sungei Buloh was opened. Here there is accommodation, under excellent conditions, for over six hundred aged and infirm. The Settlement is rapidly being filled by patients from the decrepit wards of various hospitals and decrepit vagrants. The number of inmates at the end of the year was 442.

Institute for Medical Research. In addition to the great mass of routine work yearly carried out at the Institute for Medical Research, much valuable research work was undertaken. Malaria research included study of the effect of plasmoquine administration on the infectivity of parasite-carriers; this is a line of research which may be of great importance in future measures for the prevention of malaria. Further progress was made in the study of tropical typhus, and it is hoped that information may be forthcoming which may lead to practical methods for the prevention of this disease. Enteric fever was investigated with a view to improved methods of diagnosis.

The production of lymph for smallpox vaccination was in operation at the beginning of the year, and the issue of lymph began in March. In spite of the fact that an intensive vaccination campaign called for a supply greatly in excess of that anticipated, all demands were successfully met.

VETERINARY.

Staff. Prior to July, 1930, the department was, in the Federated Malay States, a branch or division of the Medical Department. In May, Captain F. J. Sheedy, M.B.E., Deputy Director of Veterinary Services, Tanganyika Territory, was appointed Principal Veterinary Officer, Malaya, with full executive powers in the Federated Malay States and Straits Settlements and in an advisory capacity to the Unfederated States. He arrived and assumed duty on the 24th July, subsequent to which to the end of the year he was mainly employed in touring throughout the peninsula for the purpose of observing prevalent conditions and obtaining local experience, and establishing a head-quarters office in his chosen site, Singapore. In addition to the Principal Veterinary Officer the present establishment consists of seven European Veterinary Officers, holding British degrees and qualifications, and 23 Non-European Veterinary Inspectors, graduates of the several Indian Veterinary Educational Institutes.

The statistical tables below show the detailed distribution of the staff and its relationship to area, population and numbers of animals:

State.	Area in sq. miles.	Population.	Total No. buffaloes and cattle.	No. European Vety. Officers.	No. Vety. Inspectors (Graduates of Indian Colleges).
Perak	7,800	742,237	31,956	2	9
Selangor ...	3,156	553,464	12,709	1	6
Negri Sembilan	2,550	249,285	17,974	2	3
Pahang... ...	14,000	177,955	17,487	2	5
Total ...	27,506	1,722,941	80,126	7	23

The above yielding the following for the whole of the Federated Malay States:

RATIO OF					
Each European Veterinary Officer to			Each Non-European Veterinary Inspector to		
Area in sq. miles.	Population.	Buffaloes and cattle.	Area in sq. miles.	Population.	Buffaloes and cattle.
3,929	246,134	11,446	1,195	74,910	3,483

Duties.

At present the activities of the staff are mainly directed towards the control and eradication of animal disease in all its aspects including the enforcement of quarantine enactments; the application of measures against cruelty to animals; the maintenance of animal hospitals or infirmaries for the treatment of sick and injured; the inspection of live animals intended for human consumption as meat and the inspection of the meat itself in towns without a separate organization for this purpose; the training of local-born candidates for employment in the junior or subordinate posts of the department; the general care, welfare and economic management of the animals of those whose interests are inclined to be pastoral.

Animal husbandry.

The future aims of the service are, *inter alia*, to stimulate interest in and gradually to develop the animal husbandry aspect of local enterprise, to introduce ways and means whereby suitable areas may be progressively utilised for stock-raising and stock-improving, to divert the attention and energies of the pastoral section of the people into pursuits for which they are naturally adapted and to endeavour to make it worth while to do so.

Malaya can never be converted into a stock-raising country in the true sense of that term but it is felt that she could, and should, at least produce a progressively increasing quota of her own internal requirements of milk and meat.

Buffalo breeding.

Without any financial aid Mr. Macgregor, the Veterinary Officer, Pahang State (Western Division), has been making a special study of the local domesticated buffalo, for some years past, in addition to his normal routine duties. He has gradually collected valuable data concerning the biology, physiology, conformation and pathology of these useful animals which stand out so prominently in Malayan agricultural life. In rice-cultivation alone the buffalo is definitely indispensable and it seems safe to assume that his natural adaptability for work in "padi" swamps cannot be replaced by any mechanical device, nor can oxen be substituted.

A departmental scheme for the improvement of the breed of the local buffalo, experimentation by cross-breeding with other strains, general research into the genetics of this animal, and the arranging of lectures and practical demonstrations to local farmers, is now being considered. Such a scheme should be productive of highly satisfactory results in due course, and its inception and development are amply justified from every point of view.

Scientific research.

No organized research of any description has ever yet been conducted, although commendable investigations and work have been undertaken by individual officers, inadequately equipped for such a purpose. Neither laboratory nor apparatus is available. The need for systematic research is manifest and, at present, problems concerning diseases of buffaloes, cattle, horses, pigs and poultry can provide ample material for a modern institute and staff. Recommendations already submitted on this subject are now under consideration.

Specific diseases.

Rinderpest.—No cases of this disease were recorded in the Federated Malay States during 1930.

Foot-and-Mouth Disease.—Outbreaks were reported in the following States: Perak, Pahang and Negri Sembilan. All were of the mild type which is invariably noted in local epizootics.

Haemorrhagic Septicaemia.—One outbreak was recorded in Perak North, causing the deaths of six out of a herd of 14 buffaloes.

Rabies.—No canine cases were observed in Perak during the year, although an Indian who died from this cause in Taiping stated that he had been bitten by a dog in Bruas some time previously:

Negri Sembilan	No cases
Pahang	No cases
Selangor	Ten cases recorded

during 1930 (nine dogs and one calf), as against 48 during 1929. In this State 4,254 dogs were vaccinated against the disease during the year.

Amongst other diseases recorded were contagious pleuro-pneumonia of goats, swine fever, tuberculosis, piroplasmosis, bacillary white diarrhoea of fowls, equine "dry-coat" and canine distemper.

IX.—EDUCATION.

Financial.

The expenditure upon Education (including $629,331 spent by the Public Works Department on the building and upkeep of schools) was $4,128,170. Of this sum, $583,586 was paid in grants to English aided schools and $77,533 in grants to Chinese vernacular schools. The total revenue, derived mainly from school fees, collected by the department was $239,159. In addition the Education Rate realised $281,562.

Staff.

Three European mistresses were recruited and one resigned. At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 54 and the female 18. This included administrative and teaching staff and miscellaneous appointments. The difficulty of recruiting European schoolmasters has been overcome, mainly owing to the Colonial Office having arranged special training classes for them in London. The specialist post of Assistant Inspector of Tamil Schools, created in 1926, was at last filled in September, 1930.

Higher education.

One of the two highest local educational institutions open to students from the Federated Malay States is King Edward VII College of Medicine, Singapore. The other is Raffles College, which provides a higher education in subjects other than medicine. Fifty-two student teachers from English schools in the Federated Malay States were studying at Raffles College at Government expense. These students on the completion of their studies are employed as teachers in the Government and aided schools.

The Malay College, Kuala Kangsar, trains probationers for the Malay Administrative Service and for various Government departments.

Progress was made with the building of a School of Agriculture at Serdang, in order to provide practical and scientific courses in agriculture. The school should open in May, 1931.

Evening classes.

Evening classes were held as usual. In Perak elementary English was taught at four centres and book-keeping and shorthand also at Taiping. In Kuala Lumpur the curriculum comprised English, shorthand, book-keeping, typewriting, mathematics, machine drawing, carriage-building, locomotive and electrical engineering, workshop mechanics, surveying, art and Malay : book-keeping and shorthand were however dropped owing to insufficient enrolment. In Negri Sembilan there were evening classes in English at three centres but the enrolment hardly justified their continuance. The new scheme for Normal Classes which differentiates between courses for Primary and courses for Elementary teachers proved acceptable and successful.

Scholarships and free education.

Of the 18,155 pupils in English schools, 424 held Government scholarships, enjoying free education, board and lodging; 15 held other scholarships; 2,648 received free education from the Government and 189 free education from other sources. Thus 3,276 or 18 per cent. receive a free education. All pupils in Malay vernacular schools enjoy free education.

English schools.

There were 23 English Government schools for boys, 12 English grant-in-aid schools for boys and 13 for girls. The total average enrolment was 7,348, 6,331 and 4,476.

Malay College, Kuala Kangsar.

The expenditure on the Malay College, Kuala Kangsar, was $89,450. At the end of the year there were 129 students, all boarders, educated and maintained entirely at Government expense. The experiment of having student probationers for the Malay Administrative Service studying at the College proved a success. The general health of the boys was good. A Selangor boy had an epileptic fit at school and died at home in October. Cricket, hockey and association football are played and the school swimming-pool is very popular. Tennis and fives are also played. There were 46 Cadets and 75 Scouts. The Cadet Corps received a good report at its annual inspection. In March His Excellency the High Commissioner presented one of the staff, Che Jalaludin, with the gold medal of merit in recognition of his services to the Scout Movement.

Sultan Idris Training College.

At the end of the year there were 388 students and one probationer at the Sultan Idris Training College for the training of Malay vernacular teachers. For the first time students came from Sarawak and Borneo. After the fasting month 122 students completed their course. The total expenditure was $159,846, defrayed two-thirds by the Federated Malay States and one-third by the Government of the Straits Settlements. The curriculum comprises the Malay language and literature, Malay history, geography, the theory and practice of teaching, hygiene, practical training, rural science, handiwork and religious instruction. The Translation Bureau prepared a large number of new books including Malay translations of "Treasure Island" and "Sherlock Holmes".

The strength of the College Company in the Malayan Volunteer Infantry was three officers and 209 other ranks. All attended Camp at Port Dickson during July and received a favourable report. There were 199 College Scouts.

Malay vernacular education.

The Malay vernacular schools are all Government institutions and provide free education. There are 442 schools for boys and 82 for girls with average enrolments of 34,065 and 4,941. The Malay teaching staff numbers 1,541. The Malay eagerness for the education of girls continues.

Tamil vernacular schools.

There are 333 Tamil vernacular schools with an average enrolment of 12,640. Estates continued to build and equip new schools. It is certain that with the appointment of an Inspector Tamil schools will improve rapidly.

Chinese vernacular schools.

Three hundred and seventy-seven Chinese schools were registered with 903 teachers and 22,308 pupils, of whom 5,544 were girls. Grants were paid to 90 schools. The training class for Chinese teachers was continued at Kuala Lumpur. There were 41 students in two classes. There are two Government Chinese schools of primary standard at Kuala Lumpur. One was opened in 1929.

The Federal Trade School at Kuala Lumpur trains youths to become general fitters and motor mechanics. At the close of 1930 there were 77 students, two of whom came from Kelantan; the others came in more or less equal numbers from the four States of the Federation. At the end of 1929 the number in attendance was 64. The average attendance was 96.8 per cent. Sixteen students completed the three-year course of training and all but one found employment, mostly with Government departments. A stall was taken at the Malayan Agri-Horticultural Exhibition held in April and the specimens of the boys' work which were displayed aroused considerable interest. The school had no difficulty in obtaining jobs on which to give the students practice in work of a commercial nature; jobs, indeed, had often to be refused. Half of the students were accommodated in a temporary building which serves as the school hostel, the remainder being housed in the Malay Government Boarding House at Kampong Bahru. The discipline and conduct were excellent.

Technical education.

A second Trade School was opened at Ipoh on June 2nd with 25 pupils, 19 being Malays.

The Carpentry School at Bagan Serai continued to train students in furniture-making. The average enrolment was 58. At the school-leaving examination 15 candidates passed.

X.—LANDS AND SURVEY (INCLUDING GEOLOGY).

The area in private occupation at the end of the year amounted to about 2,626,801 acres under agricultural titles and 206,180 acres under mining titles.

It is estimated that of the 27,500 square miles covered by the four States of the Federation, 16.1 per cent. is land in private occupation, 25.5 per cent. is reserved forest, while the balance of 58.4 per cent. is still State land, including therein land reserved for purposes other than forests.

The land revenue (including $1,618,073 derived from Land Sales) amounted to $7,181,455 as compared with $7,760,102 (including $2,230,446 derived from Land Sales) collected in 1929.

SURVEYS.

The cost of the department may be summarised as follows:

Financial results.

Year.	Gross expenditure.	Reimbursement and revenue.	Net expenditure.
1930	$1,926,623	$645,450	$1,281,173
1929	1,903,567	674,501	1,229,066
1928	1,869,564	687,242	1,182,322

Prior to 1929 payment was received for topographical survey of forest reserves. Had this practice continued the net expenditure in 1930 would have been $1,231,173 and in 1929, $1,179,066. The increase in gross expenditure in the last two years is due principally to the expansion of the Meteorological Branch and to expenditure of a capital nature. The increase in net expenditure is due to a decrease in the fees collected for title surveys.

Revenue Survey Branch.

The main financial data of the last three years are given in the table below:

Year.	Expenditure.	Fees earned at schedule rates.	Actual revenue.	Net cost.
1930	... $927,943	... $533,305	... $330,959	... $596,984
1929	... 913,507	... 499,013	... 423,352	... 490,155
1928	... 903,842	... 462,877	... 392,896	... 510,946

The figures in the third column of this table do not include work, to which the schedule of fees does not apply, carried out free of other departments. This would increase the 1930 earnings to $591,554 or approximately 64 per cent. of the expenditure.

State of surveys with reference to requisitions for survey.

There was a sharp decline in the number of surveys requisitioned in the latter part of 1930 resulting in the receipt of requisitions for 10,757 lots only—nearly 6,000 less than in the preceding year. The number of lots surveyed was 14,790 while requisitions for 13,396 lots were satisfied. Requisitions for 23,481 lots were outstanding at the end of the year, but all but 8,978 had been surveyed.

Trigonometrical Branch.

Observations for the connection of the primary triangulation of Malaya with the Kelantan base were completed during the year and provided proof of its adequate accuracy. The system of precise levels was carried northwards through Kedah to Perlis and its extension southwards to Singapore commenced. The secondary triangulation in Pahang was extended to the Cameron Highlands area to control the survey for title of areas being alienated for tea cultivation there.

Topographical Branch.

One thousand eight hundred and sixty-eight square miles were added to the standard topographical map of Malaya, scale one inch to one mile, and 98.5 square miles of Forest Reserves were surveyed on the scale four inches to one mile. Large scale surveys in Kuala Lumpur, Ipoh and Teluk Anson were continued.

The survey of the area between Cameron Highlands and the Perak and Kelantan borders effectively disposed of the statements, which had gained some currency, that there existed, north of the Highlands, a flat area or areas more suitable for a hill station than that now being developed.

Map production.

An increase in the volume of work completed by the Central Drawing Office and the Photo-Lithographic Branch which, together, are responsible for the reproduction of the very wide range of maps available, is again recorded. Although there was some falling off in map sales the revenue of the Branch from all sources amounted to $66,948. The equipment was improved by the provision of an additional litho machine and a camera, which was constructed departmentally, capable of taking a negative 42″ × 38″. The year's productions included sixteen quarter degree sheets of the standard one mile to one inch topographical map of Malaya and State maps of Selangor, Johore and Trengganu. Topographical maps on the standard scale now cover approximately 45 per cent. of the Federated Malay States, while virtually the whole of the area alienated is covered by cadastral sheets on the scale of eight chains to one inch.

Meteorology.

The first stage in the establishment of the Meteorological Service, which is paid for by all the Malayan Governments in proportion to their revenues, ended in March with the completion of the last of the seventeen second order stations. The full programme of observations was carried out from the 1st April and from that date full daily weather reports were supplied to the Press and harbour authorities. Investigations in directions intended to lead towards the provision of local weather forecasts were made and were attended with sufficient success to encourage further work of this nature. Meteorological reports were supplied to aircraft in flight but it was found that with the limited communication facilities available the value of such reports was to some extent discounted by the time taken in transit.

General.

Under arrangements made by the Secretary of State this country was included in a tour of inspection of Colonial Survey Departments by Brigadier Winterbotham, C.M.G., D.S.O., R.E. He spent several weeks on his investigations and his report testified to the efficiency of the department.

GEOLOGY.

The results of the general geological survey of Malaya were published in a map on the scale of 12 inches to one mile. The recording by the Mining Geologist on the 8-chain revenue survey sheets of information from mines and areas prospected was continued: the amount of information thus compiled is now considerable and will be very useful for reference in the future. A soil-survey of part of Pahang in conjunction with the Agricultural Department was attempted but had to be discontinued for lack of funds. The Senior Geologist carried out exploratory work in the Benom and Main Ranges, crossing the former via the summit from west to east, and mapping part of the latter north of Fraser's Hill, thereby proving the presence of a mass of quartzite (known on Fraser's Hill as Bukit Petri) in the granite area.

XI.—LABOUR.

General. The majority of labourers in the Federated Malay States are Chinese and Southern Indians. The latter are chiefly engaged in agricultural work and on public services: the former in agriculture and every other form of manual labour. Skilled work is almost entirely in the hands of the Chinese.

In addition there are 3,560 Javanese labourers, immigrants from the Netherlands East Indies. This class of labour is recruited mainly for the Kuala Lipis and Kuantan districts of Pahang. One thousand four hundred and fifty-two of these labourers were working on contracts of service for 900 days' work entered into in Java. Five hundred and seventy of these contracts expired and 10 were entered into during the year. This is the only form of indentured labour in the Federated Malay States. All other labourers of all races are at liberty to leave their employment at any time on giving a month's notice.

Conditions of labour are governed by the provisions of the Labour Code, 1923, and by the Netherlands Indian Labourers' Protection Enactment, 1927. These Enactments are administered by a Labour Department under the direction of the Controller of Labour, Malaya. Officers of the Chinese Protectorate are appointed Deputy or Assistant Controllers of Labour to deal with questions of Chinese Labour.

Relations between employers and labourers were generally satisfactory, but it took sometime for labourers to accommodate themselves to the changed conditions which now govern the rubber industry.

Wages.

Economic conditions throughout the world have been very depressed during the year, with the result that there has been a drastic curtailment of the use of the two main products of this country. The position was aggravated by the fact that the production of both rubber and tin was rapidly increasing. In the early part of the year efforts were made by the producers of rubber and tin to restrict production to relieve the glutted markets but as these efforts had no appreciable effect on the surplus stocks, the prices of both tin and rubber fell in May to what were regarded as totally uneconomic levels. Both industries were forced to exercise the strictest economy. Wages began to fall everywhere except in the case of labourers whose wages were protected directly or indirectly under section 141, Labour Code. In July and August enquiries were held to consider the ability of the rubber industry to pay the standard rates of wages fixed previously and it was decided to recommend a reduction of approximately 20 per cent. in standard wages to Indian labourers. The reduction became effective as from the 5th October in the districts in which wages are prescribed. Wages throughout the country fell in sympathy and became effective before the 5th October in districts other than those in which wages were prescribed. Subsequently commodity prices fell in sympathy with the decreased purchasing power of the public.

Estate population.

The estate population for the past five years is shown in the following table :

—	1926.	1927.	1928.	1929.	1930.		Total.
					Males.	Females.	
Indians (Madras Presidency) ...	176,114	172,466	162,460	181,205	91,027	42,853	133,880
Chinese ...	61,064	44,239	50,647	65,617	25,979	4,104	30,083
Javanese ...	4,760	4,550	5,149	5,316	2,550	1,010	3,560
Others ...	4,822	3,963	4,788	6,642	2,590	512	3,102
Total ...	246,760	225,218	223,044	258,780	122,146	48,479	170,625

Health conditions on estates generally show an improvement on those of 1929. The death-rate among Indian labourers on estates and mines from which returns are received was 12.51 per mille on an average population of 163,591 as compared with 12.58 on an average population of 168,025 in [illegible]929, 15.71 in 1928, 18.44 in 1927 and 15.62 in 1926. The mortality among labourers of other races, of whom there are fewer employed on estates was 4.78 per mille. The death-rate per mille amongst labourers of all races was 9.87.

Health Boards.

Under the Health Boards Enactment (No. 32 of 1929) a Central Health Board has been constituted which is empowered to collect an annual cess or cesses for the purpose of carrying out health measures in areas other than Sanitary Board areas, and Local Boards under the control of the Central Health Board have been formed in all States. The Local Board areas correspond generally with those of administrative districts and the District Officers are Chairmen of the Local Boards. In order to co-ordinate the work of the Boards with the Labour Code, the Controller of Labour is appointed ex-officio President of the Central Health Board. Further progress was made in the first half of the year in organising uniformity of service by private medical practitioners on estates throughout the Federation, and with the assistance of Government, six medical officers were recruited from England by the Central Board to supervise medical work on estates in the Tampin and Kuala Pilah districts of Negri Sembilan. The erection or extension of estate hospitals for the treatment of labourers in accordance with the requirements of "The Labour Code, 1923," and "Health Boards Enactment, 1929," was proceeded with. But the rapid fall in the price of rubber during the first seven months of the year led to representations being made in September by members of the planting community for modification in the working of the Health Boards Enactment with a view to effecting such economies as were possible. At important meetings of the Central Board held towards the end of the year, it was decided to reduce expenditure to the minimum; the medical officers recruited by the Board were given notice of the termination of their services, steps were taken to reduce the staff in the office of the Administrator, and estate managers were notified that they were at liberty to make the best arrangements possible in the circumstances for the medical care of their labourers, provided such arrangements were in accordance with the requirements of the Labour Code, 1923, and were considered satisfactory by the Local Boards.

Chinese immigration and unemployment.

The fall in the prices of tin and rubber resulted in considerable unemployment amongst Chinese labourers, and measures had to be taken to meet this.

By proclamation under the Colony Ordinance the immigration of Chinese labourers was restricted from 1st August onwards to one-third of the number that had been coming into the Colony in the previous quarter. Similar powers were taken by Government in the Federated Malay States to restrict Chinese immigration by the passing of the Immigration Restriction Enactment, No. 24 of 1930, but the need for a proclamation under it did not occur as all Chinese immigrant labourers land in the Colony before proceeding to the Federated Malay States. The number of Chinese deck passengers arriving in the Colony was 200,184, while the number of those returning to China was 167,812.

Government undertook the repatriation of Chinese who desired it and who were certified by a Medical Officer to be unfit for further labour in Malaya. Three thousand six hundred and ninety-five men were repatriated at a cost to Government of $64,237.

Relief works were put in hand by Government in Perak, where unemployment was worst, and in Selangor.

An Unemployed Relief Camp was run in Kuala Lumpur for six months by a Committee of Chinese with the assistance of the Protector of Chinese. It was supported entirely by public subscriptions and cost $26,188. The total number of men admitted was 3,240. The thanks of Government are due to all who subscribed and to those Chinese who gave their time and services to running the camp.

The thanks of Government are also due to the members of the Kinta Unemployment Committee which did so much to ease the difficult situation in the district of Kinta.

The Decrepit Settlement at Sungei Buloh was utilised by the bringing into force of Enactment No. 9 of 1928 and decrepits were transferred to it to the number of over 400.

Immigration: Southern Indians.

The immigration of labourers from Southern India is regulated by the Indian Immigration Committee (of which the Controller of Labour, Malaya, is ex-officio Chairman) appointed by the High Commissioner.

The railway fares in India, steamer passages and transport expenses of such labourers to their places of employment are paid from the Indian Immigration Fund.

The total number of labourers so assisted who arrived in Penang during 1930 was 39,873 including 34,041 adults and 5,832 minors compared with 82,183 in 1929. These "assisted labourers" brought with them 2,898 infants. In previous years no record of the number of infants brought in by immigrants was maintained. Of the adult immigrants, 25,108 were men and 8,933 women. The number that proceeded to places of employment in the Federated Malay States was 29,531 as compared with 56,223 in 1929.

Owing to the low price of rubber, estates found themselves in many cases with a surplus of labour in 1930, and recruiting in India was accordingly stopped on 1st August, 1930, after which date only those labourers who wished to rejoin their families in Malaya were assisted to emigrate from India.

The Indian Immigration Fund.

The income of the fund is derived from a quarterly assessment levied on all employers of South Indian labour throughout Malaya based on the number of days' work done by such labourers during the quarter.

With a view to increasing the number of female labourers employed a differential rate is levied on male and female labourers. The rate of assessment was fixed as follows :

	Males.	Females.
1st Quarter	$2.88 ...	$2.16
2nd ,, ...	2.16 ...	1.44
3rd ,, ...	1.44 ...	.72
4th ,, ...	.36 ...	—

in respect of every 72 days' work done.

Repatriation.

During 1930, 56,063 adults with 15,873 minors and 5,825 infants were repatriated to India. Included in these numbers were 37,302 adults, 11,111 minors and 4,090 infants from the Federated Malay States. The majority of these repatriates were fit unemployed labourers for whom work could not be found in Malaya.

Among those repatriated at the expense of the Indian Immigration Fund 2,492 adults, 620 minors and 210 infants had been inmates of the Home for Indians, Kuala Lumpur, an institution maintained by the Immigration Committee.

XII.—MISCELLANEOUS.

LEGISLATION.

The total number of Enactments passed, excluding the Supply Enactments, was thirty-one. Of these, eighteen were amending Enactments, five were re-enactments of already existing provision, two were repealing Enactments and the remaining six introduced new matter into the statute book.

Of the new Enactments, the most important are the Muhammadan Law and Malay Custom (Determination) Enactment, and the Copyright Enactment. The former provides that any Civil Court before which any question of Muhammadan Law or Malay Custom arises may refer such question to the

State Council whose decision of the point is final and must be given effect to by the Court. The Copyright Enactment follows the lines of the English Act of 1911, with certain local variations and omissions.

The Pilgrims and Pilgrim Ships Enactment reproduces, with necessary alterations to suit local conditions, the provisions of Part IV of the Merchant Shipping Ordinance of the Colony.

The Immigration Restriction Enactment provides for the prohibition and regulation of immigration of labourers in certain circumstances and is complementary to the Colony Ordinance.

Enactment 25 of 1930 introduces the principle of the limitation of liability of shipowners as contained in the Merchant Shipping Act.

A Rule Committee to regulate procedure in the Supreme Court is established by Enactment No. 27 of 1930.

The most important re-enactment was the Stamp Enactment which repeals the old State Enactments and brings the law on this subject up to date. Other re-enactments include a new Minor Offences Enactment, a Register of Criminals Enactment, the Emergency Regulations Enactment, the Census Enactment, and the Vaccination Enactment.

The amending Enactments of importance were the amendment to the Civil Procedure Code affecting the attachment of immovable property and the abolition of a maximum rate of interest prescribed by law, the amendment to the Labour Code, and that of the Railways Enactment giving the Railway Administration authority to establish road motor services.

The Public Servants Liabilities Enactments and the Pawnbrokers (Amendment) Enactment, 1929, were repealed.

PLANTERS' LOANS BOARD.

Planters' loans.

On 1st January, 1930, the Board had outstanding as "Planters" loans to six companies ($445,000) and fifteen individuals ($146,900), the sum of $591,900. It lent in new loans (ten) during the year a further $182,500, while one property completed repayment of its loan in full ($1,000) and seven other properties made partial repayments to the extent of $14,300. At the end of the year, the "Planters" loans outstanding were $759,100 to nine companies ($571,000) and sixteen individuals ($188,100).

Building loans.

Building loans at the beginning of the year totalled fifty-one (48 borrowers) amounting to $1,354,040. During the course of the year, a further twenty-three loans amounting to $300,000 were approved but of these seven totalling $82,000 had not been taken up by the end of the year. Repayments in full were made by seven borrowers totalling $81,200, forty-three others made partial repayments to the extent of $145,180, while undrawn balances not required ($16,930) were cancelled. At the end of the year, the Board had outstanding sixty-two loans (59 borrowers) amounting to $1,328,730.

War Service loans.

Under the War Service Land Grant Scheme, at the beginning of the year, seventy-two ex-soldiers were indebted to the Board in respect of loans amounting to $1,746,750. Partial repayments by two estates were made during the course of the year amounting to $13,500, leaving at the end of the year the sum of $1,733,250 still outstanding.

Interest.

The interest earned during the year amounted to $196,631, of which $38,184 was in respect of "Planters" loans, $76,289 in respect of "Building" loans and $82,158 in respect of "War Service" loans. Interest collected totalled $148,211 and the amount credited to Federal Revenue, in respect of all loans, was $101,483.

Profit and loss.

The profit on working earned by the Board during the year was $32,672 but after providing for all doubtful debts in respect of "War Service" loans, the results for the year shew a loss of $19,469.

Reserves.

The reserves of the Board stand at $790,000.

Capital.

The capital of the Board is $4,000,000, created by the "Planters Loans Fund Enactment, 1915".

PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the eighth year of the working of the Department of the Public Trustee.

The duties of the Public Trustee are:

(*a*) to act in the administration of estates of small value;

(*b*) to act as an ordinary trustee;

(*c*) to act as a trustee appointed by the Court.

During the year the Public Trustee accepted 24 trusts in all as compared with 21 in 1929.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at over $4,249,000.

The office of Official Administrator, Federated Malay States, is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1930 was 28, valued at over $93,000. At the close of the year 27 estates with a gross value of $133,254 were being administered.

ESTATE DUTY OFFICE.

The new Estate Duty Enactment came into force on the 1st October, 1929. This is a Federal Enactment, and duties collected under it are Federal. It does not apply to the estate of persons dying before the 1st October, 1929; duty on such estates is still collected under the Stamp Enactment.

Total estate duty collected throughout the Federated Malay States in 1930 was $224,608 as compared with $339,438 for 1929 and $529,937 for 1928.

The effects of the depression in trade were very strongly marked in this office. Even the more valuable estates were heavily in debt: and considerable difficulty was experienced in collecting duty, owing to the rapid fall in the value of land, and to the accumulation of interest on charges, etc., after property had come into the hands of representatives. Rubber estates and mining leases became increasingly difficult to value in the course of the year: in fact in more than one instance a rubber estate was declared (though not assessed) as a liability.

VOLUNTEERING.

The year has shown satisfactory progress all round in numbers and efficiency due to the zeal of all ranks of the Forces and to the efforts of the late Commandant and Permanent Staff. Progress.

The Malay States Volunteer Regiment has increased its numbers by 169. Strength.

Although the Malayan Volunteer Infantry is not yet up to strength its numbers have increased and its efficiency has improved considerably.

The weapon training of the Malay States Volunteer Regiment remains at a high level, and that of the Malayan Volunteer Infantry is satisfactory.

Mobile columns.

During the year a great deal was done to complete the war organization of mobile M.T. Columns, to make all ranks of Malay States Volunteer Regiment and Malayan Volunteer Infantry familiar with the organization, and to train them in the operations that such columns might be required to carry out.

The Light Battery, Malay States Volunteer Regiment, which was only formed in 1929, has rapidly increased its efficiency.

Malayan Volunteer Infantry.

Particular attention is drawn to the increase in efficiency of the Malayan Volunteer Infantry, to the way in which all ranks have responded to the appeal to apply themselves to improving their efficiency, and particularly to the excellent response they made to the appeal to attend camp for a fortnight instead of for a week.

Reorganization.

During the year a reorganization of the system of Command of the Federated Malay States Volunteer Force was worked out in which, without interfering with the continued and separate existence of the Malay States Volunteer Regiment and Malayan Volunteer Infantry Corps and without altering the administration of the status of the Malayan Volunteer Infantry as Troops of the Rulers of States, the duties of the officers commanding State Troops are more clearly defined and command and training generally will be facilitated.

THE STATISTICS DEPARTMENT.

Staff.

The Statistics Department had no staff in the Federated Malay States, but continued to work through the courtesy of other departments, the principal part of its duties being to deal with material concerning Malaya as a whole. The Secretary of State approved the creation of the post of Deputy Registrar-General of Statistics, Federated Malay States, and the appointment to it of the Deputy Supervisor of Rubber (Mr. Gordon Carrie) who remained seconded to the Agricultural Department throughout the year.

Finance.

The Government agreed to share equally with the Colony the cost of the Statistics Department, which has hitherto been borne by the Colony.

Legislation.

The Bureau of Statistics Enactment, 1919, was amended on the lines of legislation passed in the Colony and the Unfederated States, and rules passed under it to provide for the collection of returns of rice-stocks and foreign migration.

Under the Enactment passed during the year for control of immigration, the arrival of labourers from China was limited to approximately one-third of the number arriving in the second quarter of the year.

Food supply. A scheme was approved, in concurrence with other Administrations, under which this Government will be kept informed of supplies of food-stuffs and livestock in the country with a view to assessing the extent of its dependence on foreign imports.

Rents. Assessment values for Kuala Lumpur town for 1931 showed a fall in rent values during 1930, as compared with 1928, of 2.1 per cent.

Cost of living. The department made an estimate of changes in the general cost of living since 1914 and supplied material to the joint Temporary Allowances Commission.

Publications. Publications included a Trade Report for Malaya in a revised form, a handbook of information relating to rubber, and monthly statements of the imports, exports and production of rice, rubber and tin, returns of a commercial value being now issued simultaneously in Kuala Lumpur, Singapore and London. A revised edition of the Handbook to British Malaya, edited by Mr. R. L. German, M.C.S., was published in London at the end of the year. The department also supplied information on various matters to Government departments and private firms, including the loan of books from the Reference Library.

GENERAL.

His Excellency Sir Cecil Clementi, K.C.M.G., previously Governor of Hongkong, assumed duty as High Commissioner for the Malay States on the 5th of February.

Mr. John Scott, C.M.G., held the office of High Commissioner from the beginning of the year until Sir Cecil Clementi's arrival, and again when the latter proceeded on leave in October.

Sir William Peel, K.C.M.G., K.B.E., Chief Secretary to Government, was promoted to be Governor of Hongkong, and Mr. C. W. H. Cochrane, C.M.G., who had been acting for him, was confirmed in the post of Chief Secretary on the 10th of April.

Mr. C. F. Green, British Resident, Pahang, retired in April and was succeeded by Mr. H. G. R. Leonard.

His Majesty the King was graciously pleased to confer the following honours at the New Year:

Honorary Knight Commander of the Most Excellent Order of the British Empire (Civil Division)	Raja Chulan ibni Almarhum Sultan Abdullah, C.M.G., J.P., Raja di-Hilir of Perak.
Honorary Commander of the Most Excellent Order of the British Empire (Civil Division)	Choo Kia Peng, J.P.
Commander of the Most Excellent Order of the British Empire (Civil Division)	G. E. S. Cubitt, Conservator of Forests, Federated Malay States and Straits Settlements, retired.
On His Majesty's Birthday—	
Companion of the Most Distinguished Order of Saint Michael and Saint George	Hon'ble Mr. C. W. H. Cochrane.
Officer of the Most Excellent Order of the British Empire (Military Division) ...	Captain C. Darby, Malay States Volunteer Regiment.
Member of the Most Excellent Order of the British Empire (Civil Division)	Dr. H. W. Jack, Economic Botanist, Department of Agriculture.

Certificates of Honour were awarded to the following in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Abdul Hamid bin To'Kaya, Orang Kaya Maha Bijaya;
Loke Chow Thye, J.P.;
Wan Ahmad bin Ungku Khatib;
Dr. Saw Ah Coy, J.P.;
Haji Muhammad Shukri bin Alang Karim, Dato' Maharaja Indra.

A Durbar of the Rulers of the Federated Malay States was held at Klang on the 11th of September, presided over by His Excellency the High Commissioner. A second Durbar which was attended in addition by the Rulers of the Unfederated Malay States took place at Government House, Singapore, on the 15th of October.

The Power Station of the Perak River Hydro-Electric Power Company at Chenderoh was opened by His Excellency the High Commissioner in the presence of a large and distinguished gathering on the 28th June.

The main feature of this highly important work, which has taken three years to complete, is the dam across the Perak River. The dam is of the Ambursen type consisting in essentials of concrete buttresses on which reinforced concrete slabs have been laid. The length over all is 621 feet with a head of 60 feet, and the structure contains 150,000 cubic yards of concrete and 6,000 tons of steel bars. The level of the lake will be controlled by a one-piece sector gate 100 feet wide. The power-house contains three 9,000 kw. vertical spindle turbo-alternators, with 193.7 revolutions per minute and generating 6,600 volts. A special broad gauge boatway has been constructed to facilitate navigation from the upper to the lower reaches of the Perak River. The lake to the north of the dam site has a coast line of approximately 200 miles and an area of 10.1 square miles at 193 feet elevation.

A Central Committee for Malaya to deal with European unemployment was appointed in October, and did its work well. In connection with this movement a Service Camp was started at Port Dickson under the charge of the military authorities and proved a marked success.

I may perhaps be forgiven for ending on a personal note. This is my last Annual Report, as I am retiring from Malaya in July. My regret at saying farewell to the country which I have served for close on 32 years is increased by the fact that I am leaving it at a period of such acute depression. Courage and patience of a high order are required, but there is no occasion for undue pessimism. I am convinced that the Federated Malay States will return to their former prosperity, and can only hope that the lessons of the present slump will not be forgotten.

C. W. H. COCHRANE,
Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
9th May, 1931.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,355	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6 968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,922	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915

1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584	84,660,975	201,393,405	349,012,595	67,041	15,424,409	261,352	4,312,922	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870	82,470,192	168,020,418	213,652,044	62,065	9,127,460	249,675	1,086,370	6,224,381	19,272,903	1,722,941	1930

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911 and 1921. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891. * As now corrected. ‖ Excluding bullion and specie. † The figures for previous years included items now omitted owing to reclassification of revenue.

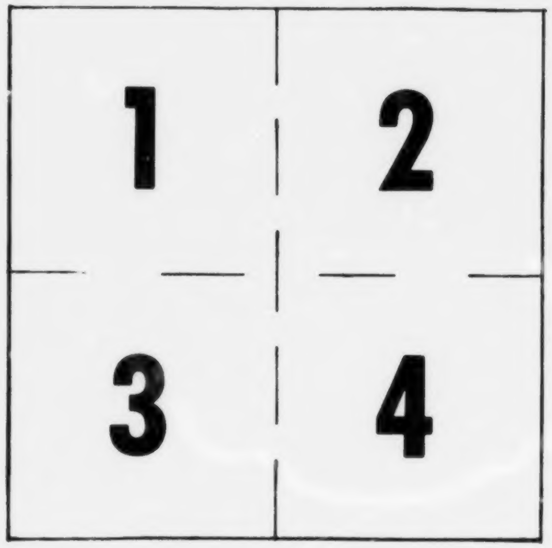
APPENDIX B.

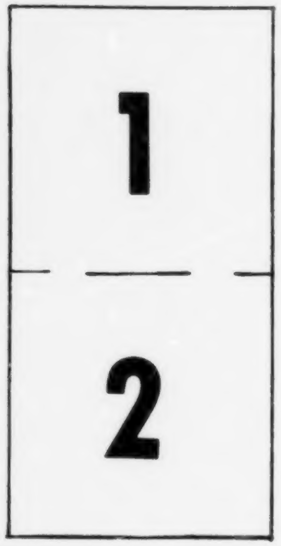
STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1930.

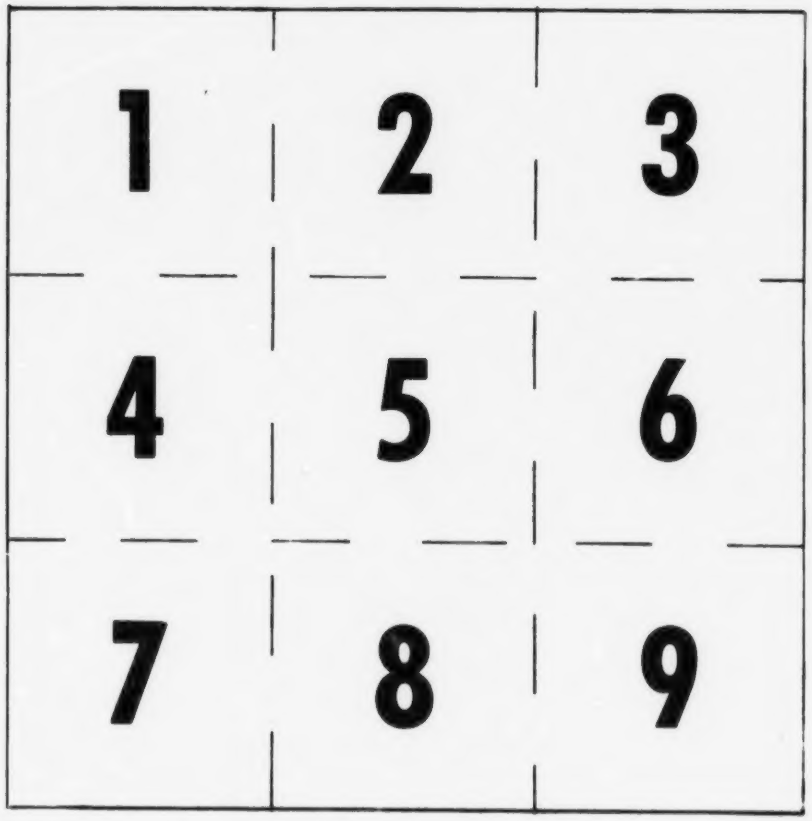
Dr. *Cr.*

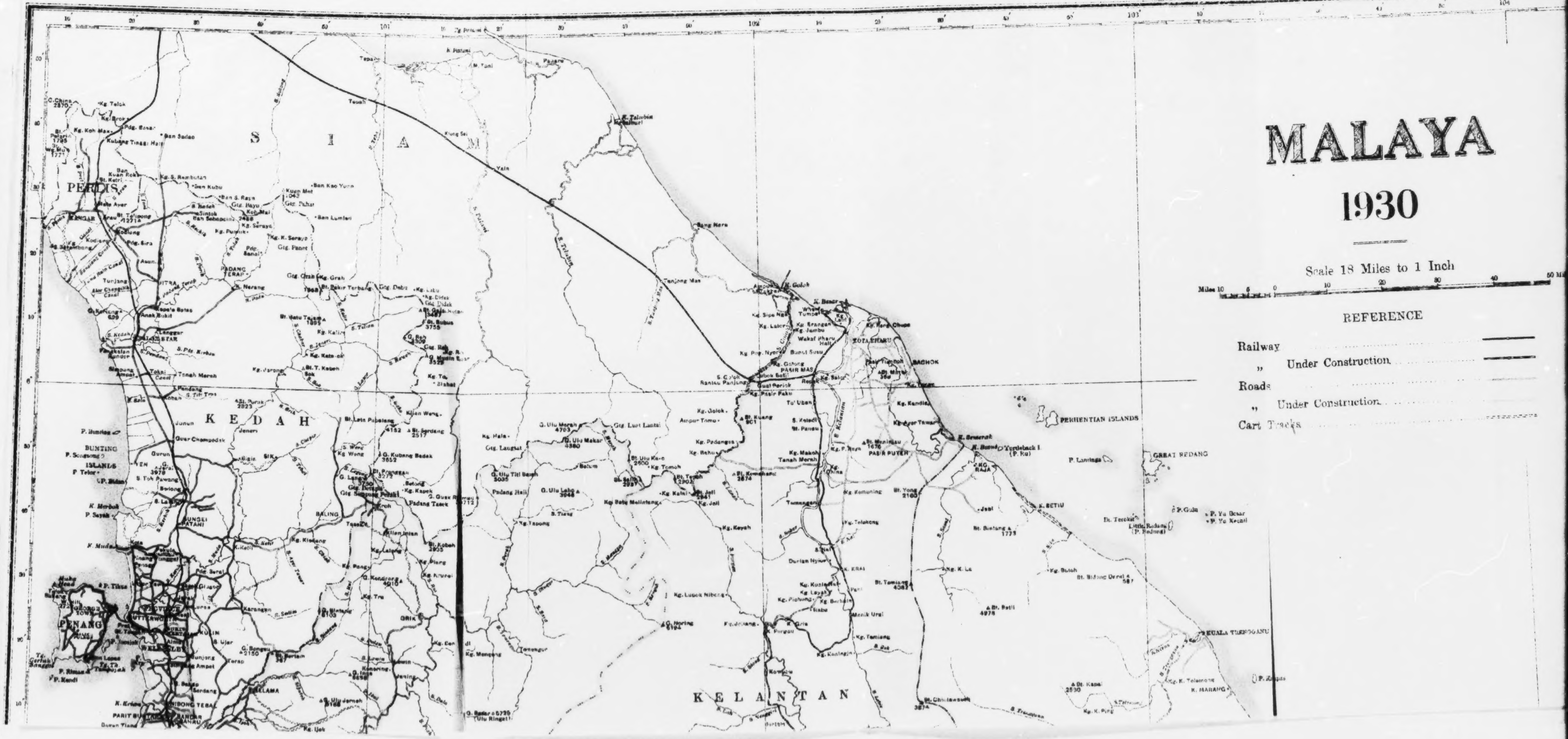
	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamp, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamp, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	...	20,367,692 10			
Posts and Telegraphs Department	...	4,669,065 41			
Topographical Survey Department	...	763,362 66			
Topographical Survey of Forest Reserves ...	...	67,063 83			
Railways—Open Lines	...	9,175,817 31			
" Construction	...	37,781,165 62			
			72,824,166 93		
To Balance ..	...	...	1,473,382 67		
			$80,185,714 29		$80,185,714 29

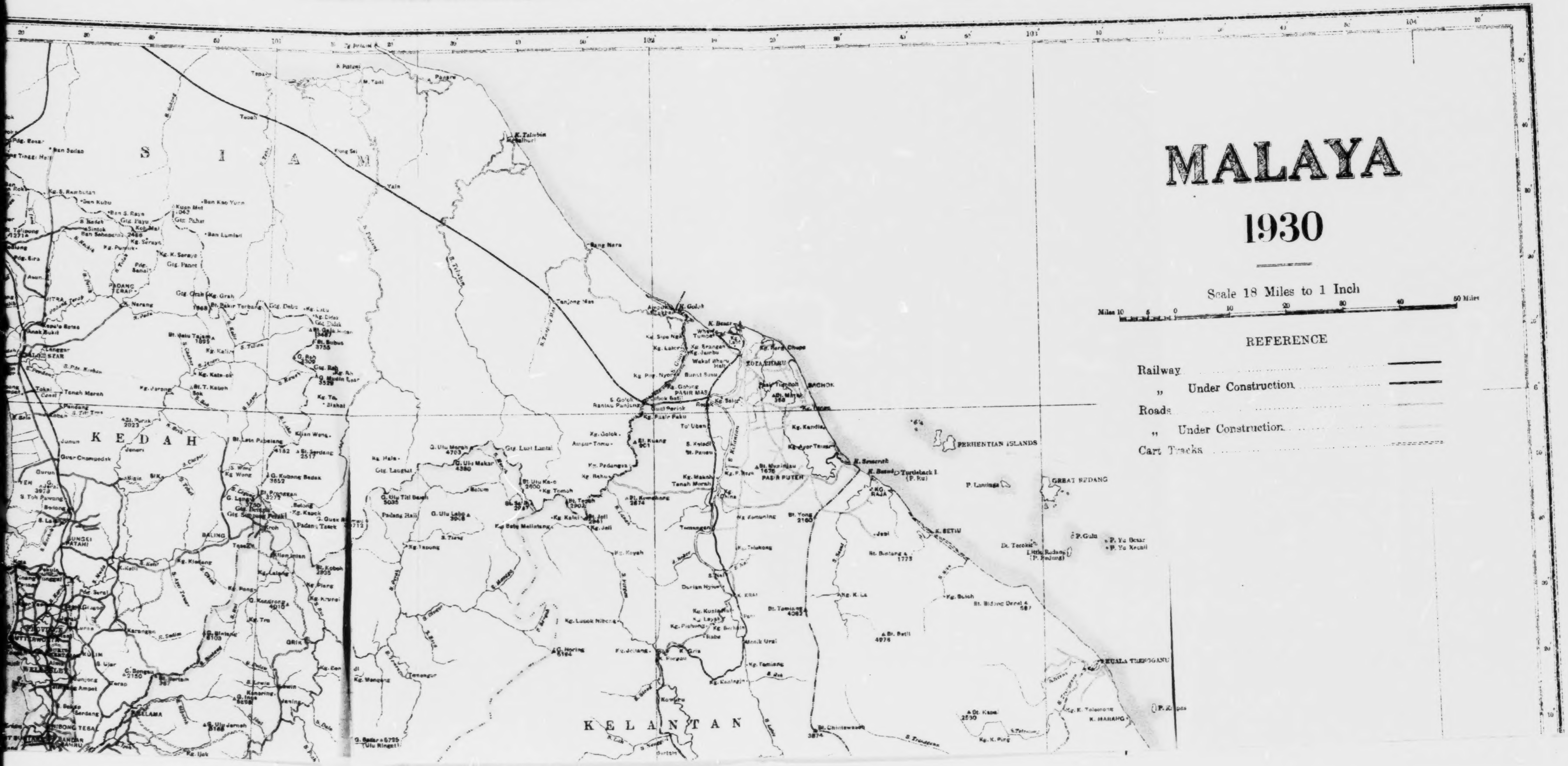
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.








MALAYA
1930
Scale 18 Miles to 1 Inch
Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Railway
" Under Construction
Roads
" Under Construction
Cart Tracks
S I A M
K E D A H
K E L A N T A N
PERLIS
KANGAR
ALOR STAR
SUNGEI PATANI
PENANG
BUTTERWORTH
PROVINCE WELLESLEY
BUKIT MERTAJAM
NIBONG TEBAL
PARIT BUNTAR
BANDAR BAHARU
KULIM
BALING
GRIK
KOTA BHARU
PASIR MAS
PASIR PUTEH
BACHOK
TUMPAT
K. BESUT
KG. RAJA
K. SETIU
KUALA TRENGGANU
K. MARANG
PERHENTIAN ISLANDS
P. Lantinga
GREAT REDANG
P. Yu Besar
P. Yu Kecail
P. Kapas
Little Redang (P. Pedang)
BUNTING ISLANDS
P. Songsong
P. Telor
P. Bidan
P. Sayak
P. Rimau
P. Kendi
Yala
Tepah
Patani
Tanjong Mas
Sang Kora
Kuala Krai
Gunong Jerai 3978



MALAYA

1930

Scale 18 Miles to 1 Inch

REFERENCE

Railway

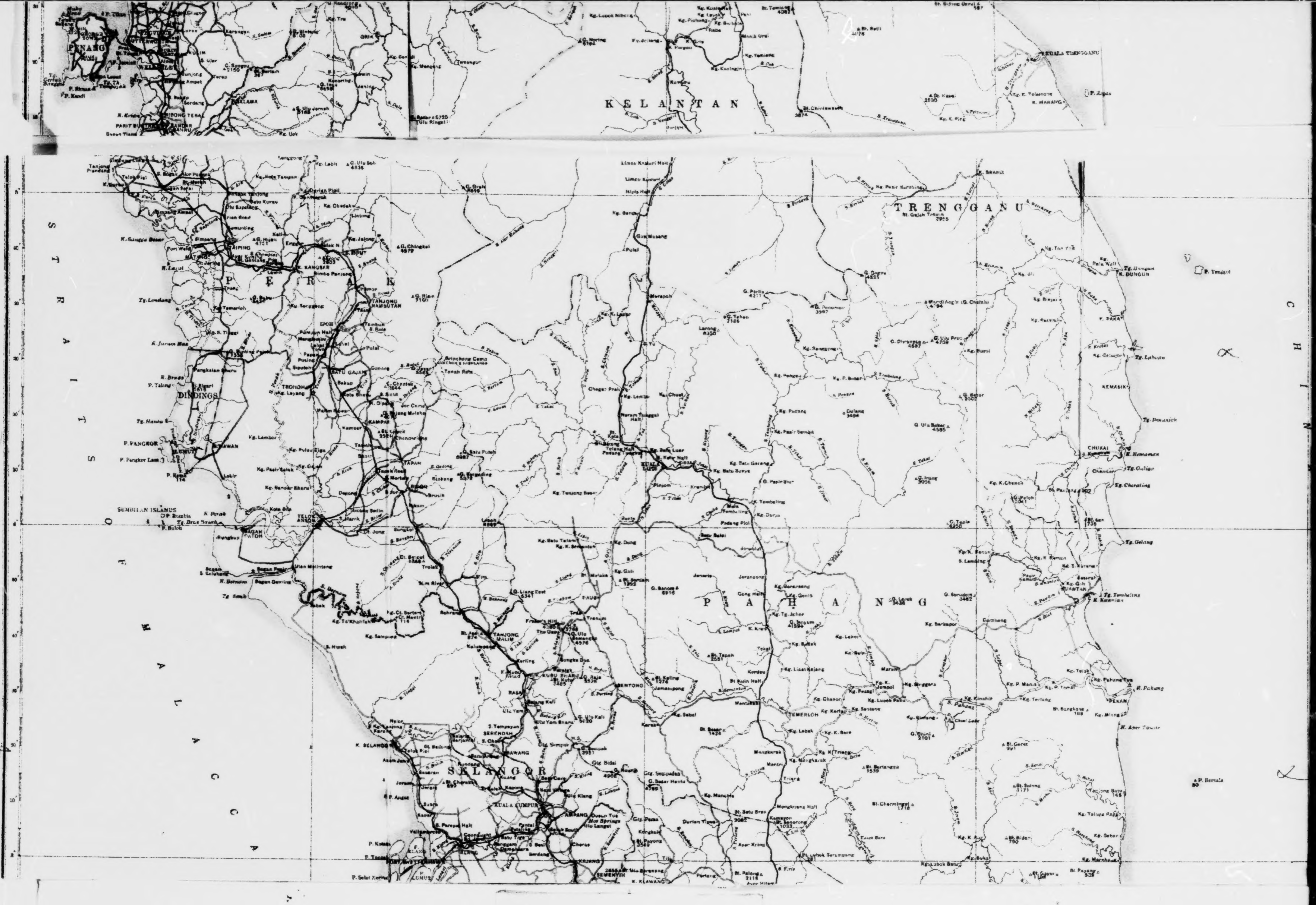
" Under Construction

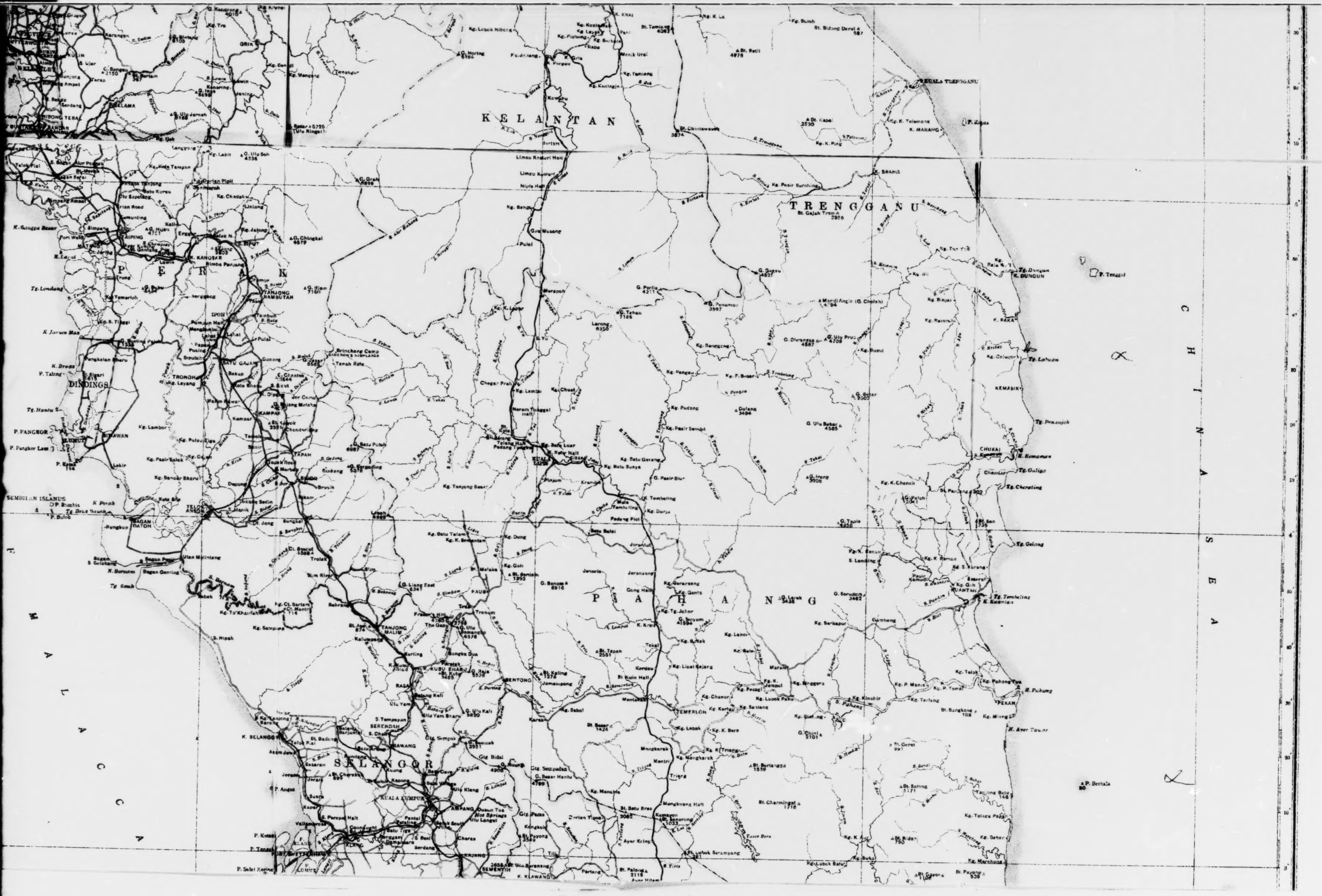
Roads

" Under Construction

Cart Tracks

Miles 10 5 0 10 20 30 40 50 Miles
S I A M
K E D A H
K E L A N T A N
Yala
Tanjong Mas
K. Golok
K. Besar
KOTA BHARU
PASIR MAS
PASIR PUTEH
BACHOK
PERHENTIAN ISLANDS
GREAT REDANG
P. Lang Tengah
KUALA TRENGGANU
K. BETIU
ALOR STAR
Anak Bukit
Kepala Batas
Jitra
PADANG TERAP
Gurun
Jeniang
SUNGEI PATANI
BALING
Kroh
Grik
KULIM
Bukit Mertajam
Butterworth
SELAMA
P. Kapas


PENANG
BUTTERWORTH
KELANTAN
KUALA TRENGGANU
TRENGGANU
K. DUNGUN
KEMASIK
CHUKAI
P E R A K
TAIPING
K. KANGSAR
IPOH
BATU GAJAH
DINDINGS
P. PANGKOR
KAMPAR
TAPAH
TELOK ANSON
SEMBILAN ISLANDS
BAGAN DATOH
TANJONG MALIM
FRASER'S HILL
KUALA LIPIS
P A H A N G
KUANTAN
TEMERLOH
PEKAN
BENTONG
RAUB
S E L A N G O R
KUALA LUMPUR
KLANG
SERENDAH
RAWANG
K. SELANGOR
S T R A I T S   O F   M A L A C C A
C H I N A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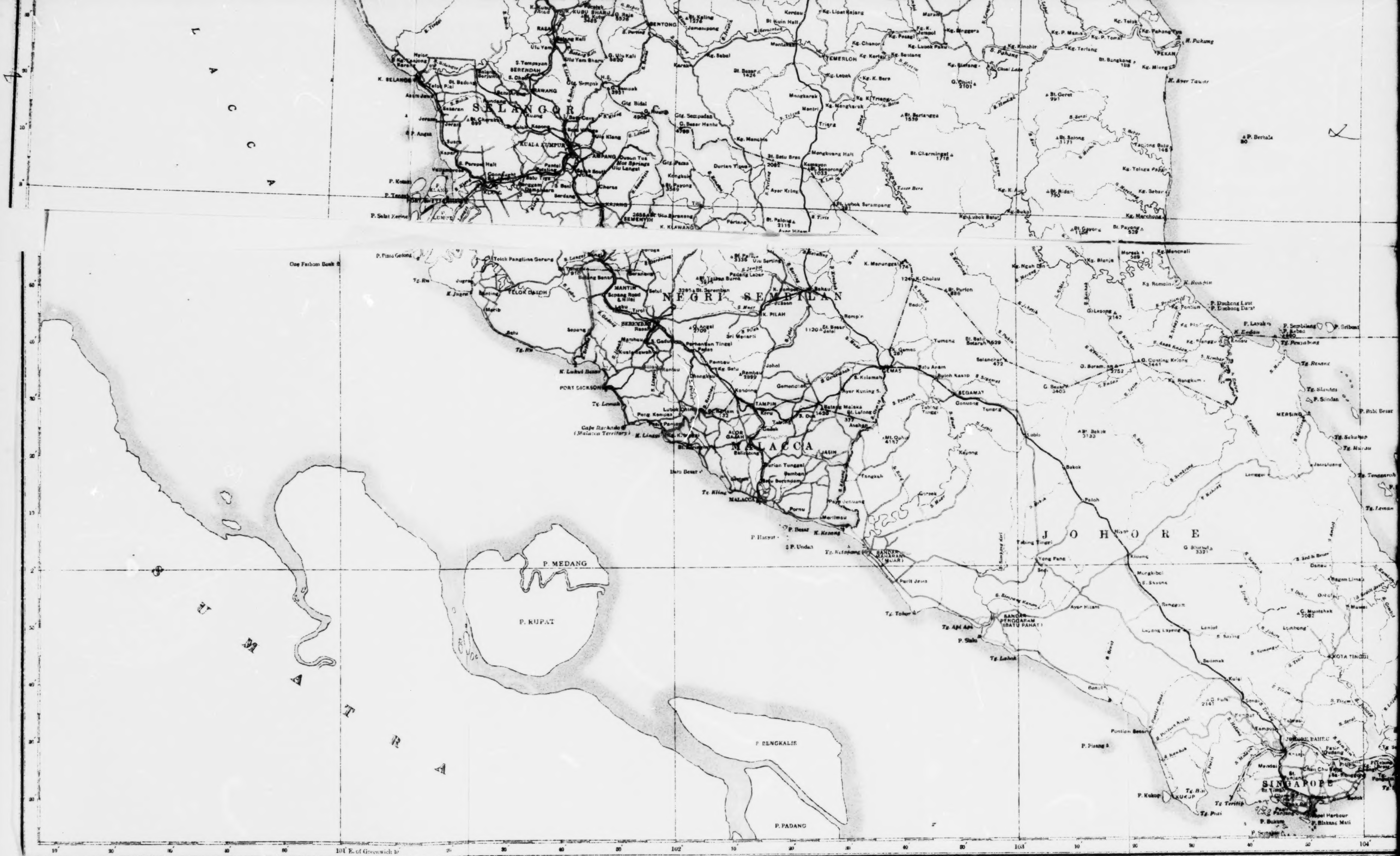
CHUKAI
K. Kemaman
KUANTAN
PEKAN
IPOH
TAIPING
K. KANGSAR
BATU GAJAH
KAMPAR
TAPAH
TELOK ANSON
BAGAN DATOH
TANJONG MALIM
KUALA LIPIS
BENTONG
TEMERLOH
RAWANG
KUALA LUMPUR
KLANG
PORT SWETTENHAM
AMPANG
KAJANG
SEMENYIH
KUBU BHARU
Fraser's Hill
Gua Musang
Merapoh
Raub
Tg. Penanjoh
Tg. Tembeling
P. Tenggol
P. Berhala
P. PANGKOR
LUMUT
SEMBILAN ISLANDS
K. Selangor
G. Tahan 7186
CHINA SEA
MALACCA


SELANGOR
KUALA LUMPUR
K. SELANGOR
KLANG
NEGRI SEMBILAN
SEREMBAN
PORT DICKSON
Cape Rachado (Malacca Territory)
K. PILAH
TAMPIN
GEMAS
MALACCA
ALOR GAJAH
JASIN
TEMERLOH
PEKAN
BENTONG
SEGAMAT
MERSING
KOTA TINGGI
BANDAR MAHARANI (MUAR)
BANDAR PENGGARAM (BATU PAHAT)
J O H O R E
JOHORE BAHRU
SINGAPORE
Keppel Harbour
P. MEDANG
P. RUPAT
P. BENGKALIS
P. PADANG
S U M A T R A
M A L A C C A
101° E. of Greenwich
102°
103°
104°

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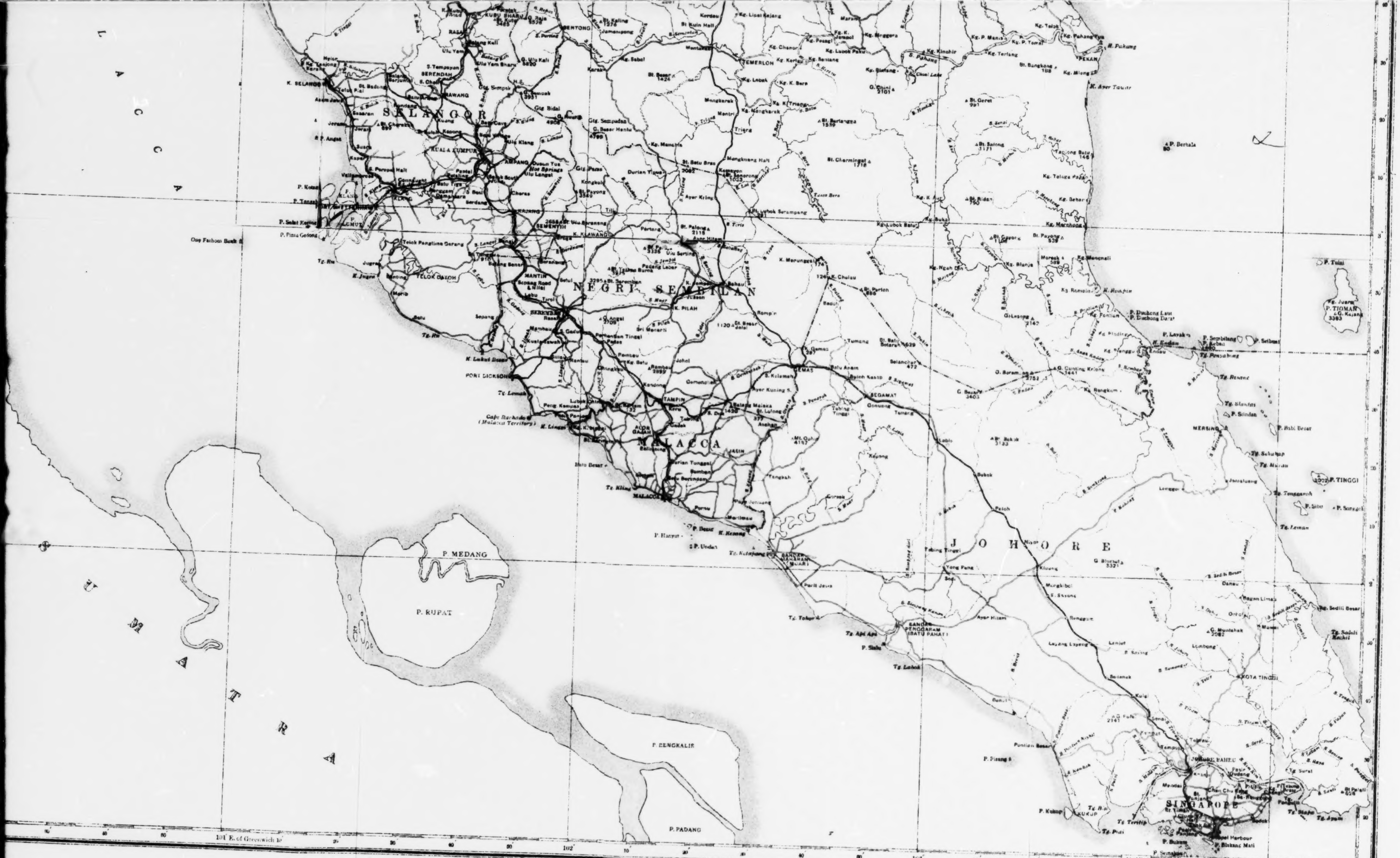
F. M. S. Survey


M A L A C C A
S U M A T R A
SELANGOR
NEGRI SEMBILAN
MALACCA
JOHORE
KUALA LUMPUR
KLANG
PORT SWETTENHAM
KAJANG
SEMENYIH
SEREMBAN
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Cape Rachado (Malacca Territory)
TAMPIN
ALOR GAJAH
JASIN
MALACCA
K. PILAH
GEMAS
SEGAMAT
TEMERLOH
PEKAN
BANDAR MAHARANI (MUAR)
BANDAR PENGGARAM (BATU PAHAT)
KLUANG
KOTA TINGGI
MERSING
JOHORE BAHRU
SINGAPORE
P. TIOMAN
P. TINGGI
P. MEDANG
P. RUPAT
P. BENGKALIS
P. PADANG
101° E. of Greenwich
102°
103°
104°

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FEDERATED MALAY STATES.
FIJI.
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FEDERATED MALAY STATES.

ANNUAL REPORT

ON THE

SOCIAL AND ECONOMIC PROGRESS OF THE PEOPLE OF THE FEDERATED MALAY STATES

FOR

1931

BY

A. CALDECOTT, C.B.E.,
Acting Chief Secretary to Government, Federated Malay States.

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Supplement to the "F.M.S. Government Gazette," July 29, 1932.

FEDERATED MALAY STATES.

REPORT OF THE CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1931.

CHAPTER I.

Geography, including Climate and History.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

Selangor (3,150 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal Capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,550 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, G.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Mu'tasim Bi'llah Al-Sultan Abdullah, K.C.M.G., ibni Al-Marhum Al-Sultan Ahmad Al-Maazam Shah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and they arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is large, being from 20° to 25°F. generally. The variation of temperature throughout the year is very small and the excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has never been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter half of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December, followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 feet) is 242 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, such as Fraser's Hill and Cameron Highlands, the average rainfall is 109 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet) 79°F. The coolest night temperature recorded at Fraser's Hill is 56°F. and at Tanah Rata 42°F. or only 10°F. above freezing.

CHAPTER II.

Government.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to the Resident is also a member. The other members consist of members of the Royal family, major chiefs and leading representatives of the non-Malay communities. Since the creation of a Federal Council in 1909 the State Councils have legislated only in matters of religion and custom, but in accordance with the policy of decentralisation, the aim of which is to restore to the States a greater measure of autonomy, these Councils have now been reorganised and strengthened to fit them for increased legislative and administrative responsibilities.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay

States, and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The States agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State, and for the proper enactment of all laws intended to have force throughout the Federation or more than one State. The Federal Council, as at present constituted, consists of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President, the Chief Secretary to Government, Federated Malay States, the four British Residents, the Legal Adviser, the Financial Adviser, the Principal Medical Officer, the Controller of Labour, the Director of Public Works, the Director of Education, the Commissioner, Trade and Customs, the Secretary for Chinese Affairs, one Official Member nominated by the High Commissioner, and twelve Unofficial Members, who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council generally meets at least three times a year.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 24 districts in each of which there is a Sanitary Board, a Licensing Board, a Health Board and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Health Boards are responsible for health matters in rural districts. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The figures for the population of the Federated Malay States in the middle of the year 1931 have been calculated from the preliminary report of the Superintendent of Census issued in July. The figures published in that report referred to the population figure found at midnight on Wednesday, 1st April, and the mid-year figures are calculated from these by the process of geometrical progression.

The population of the Federated Malay States for 1931 is taken as 1,723,117; the census number on the 1st April having been 1,711,793 The distribution among the different States was as follows:

POPULATION OF F.M.S. BY RACE AND COMPARISON WITH 1921 TOTAL POPULATION.

State.	Europeans.	Eurasians.	Malays.	Chinese.	Indians.	Others.	Total 1931 Census.	Total 1921 Census.
Perak ...	2,369	1,255	272,347	325,793	160,460	3,801	766,025	599,055
Selangor ...	2,738	2,288	122,482	241,268	157,176	6,920	532,872	401,009
N. Sembilan	877	685	86,199	92,955	50,117	2,267	233,100	178,762
Pahang ...	391	139	109,917	53,157	15,676	516	179,796	146,064
F.M.S. ...	6,375	4,367	590,945	713,173	383,429	13,504	1,711,793	1,324,890

The population at mid-year 1931, with birth and death-rates, was as follows:

Population.		Total births.		Birth-rate.		Total deaths.		Death-rate.
1,723,117	...	57,457	...	33.2	...	32,871	...	19.1

No method of correction is employed in estimating the birth and death-rates.

The Superintendent of Census reported in 1931 an increase in the Federated Malay States population of 29.2 per cent. on the census figure for 1921, apportioned among the different States as follows:

1931 Census Figure per cent. Increase on	1921.
Perak	27.87
Selangor	32.27
Negri Sembilan	30.40
Pahang	23.10
F.M.S. ...	29.20

There was extensive emigration and repatriation of Indian and Chinese labour during the latter part of 1931, for which no figures are available except for repatriations at Government expense.

Thirty-two thousand three hundred and one Chinese were repatriated by Government and in addition immigration from China was largely suspended throughout the year. Immigrants were estimated at 9,446 only. The number of labourers and their dependants repatriated to India was 56,063.

On the other hand there was an actual gain in population to the Federated Malay States of 24,586 on account of the excess of births over deaths.

After balancing the known losses on account of repatriations against the known gains due to the preponderance of births over deaths and to immigration there was a net loss to the Federation of 35,969 during 1931. This takes no account of any gain or loss resulting from unrecorded movement of the population.

The following two tables, published by the Registrar-General of Statistics, Straits Settlements and Federated Malay States, give the turnover regarding Chinese, Javanese and Southern Indian labourers comparatively for the whole of the Peninsula for the years 1930 and 1931.

ARRIVALS AND DEPARTURES OF CHINESE, JAVANESE AND SOUTHERN INDIAN LABOURERS BY SEA, FOR THE YEARS 1930 AND 1931.

Nationality.	Singapore.		Penang.		Port Swettenham.		Total.		Net (+Excess arrivals). (−Excess departures.)
	Arrivals.	Departures.	Arrivals.	Departures.	Arrivals.	Departures.	Arrivals.	Departures.	
Chinese from and to China (1)	70,696	150,793	8,389	46,524	...	15,583	79,085	212,900	−133,815
Javanese from and to Java (2)	241	1,329	...	...	...	...	241	1,329	− 1,088
Southern Indians from and to Presidency of Madras (3)	6,643	18,018	10,873	44,973	2,010	37,741	19,526	100,732	− 81,206
Total ...	77,580	170,140	19,262	91,497	2,010	53,324	98,852	314,961	−216,109
For the year 1930 ...	206,735	186,493	52,181	107,483	28,967	53,613	287,883	347,589	− 59,706

SUMMARY.

NET ARRIVALS (+) AND DEPARTURES (−) FOR THE YEARS 1930 AND 1931.

	1930.		1931.
Chinese	+19,068	...	−133,815
Javanese	− 398	...	− 1,088
Southern Indians	−78,376	...	− 81,206
Totals ...	−59,706	...	−216,109

From the lowered death-rate in 1931 it might be assumed that the population was underestimated in 1930, but from other data available it is known that the year under review was definitely a healthy one.

The sex ratio, when the 1911 census was taken, showed that the population was made up of 232 males to every 100 females while in 1921 the ratio had been reduced to 181 to every 100.

According to the 1931 census the ratio now is 157 males to 100 females.

The table for individual races is given below:

PROPORTION OF MALES TO EVERY 100 FEMALES.

	1911 Census.	1921 Census.	1931 Census.
Malays	112	110	106
Chinese	533	285	203
Tamils	325	225	185

The significance of these figures will be apparent both as connoting settled and happier conditions of life and as influencing the birth-rate.

A fuller analysis of the significance of the figures ascertained by the last census will be possible when the final report is published.

BIRTHS.

Births registered during the year numbered 57,457, a decrease of 5,382 on the previous year's record total of 62,839. This decrease was distributed generally throughout the States and may in part be attributed to abnormal emigration from the country. Particulars of births registered are included in Tables II and III below:

TABLE II.

BIRTH-RATES IN THE F.M.S. ACCORDING TO RACE COMPARED FOR 1921-1931.

	Malay.	Chinese.	Indian.	All races.
1921	38.5	17.1	24.5	27.2
1922	36.1	17.3	21.1	25.5
1923	36.0	17.8	20.2	25.3
1924	37.1	21.1	21.9	27.3
1925	36.1	23.3	23.5	28.1
1927	35.9	30.7	23.5	30.5
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3

TABLE III.

SUMMARY OF BIRTH-RATES IN THE F.M.S. PER MILLE ACCORDING TO STATE AND RACE FOR 1931.

State.	Malays.	Chinese.	Indians.	Non-Asiatic.	Others.	All races.
Perak	35.7	28.0	30.5	17.2	26.2	31.2
Selangor	38.4	35.1	35.5	31.0	8.1	35.5
Negri Sembilan	40.2	31.0	29.7	5.7	10.1	33.3
Pahang	37.4	34.6	26.5	7.6	9.2	35.4
F.M.S.	37.3	31.3	32.3	20.9	13.5	33.3

The birth-rate per thousand living persons is calculated at 33.2 compared with 36.5 (in 1930) and 27.2 at the last previous period of census. The rate is 3.4 per thousand above the mean and 5.1 above that of the median year of the period 1921 to 1930, both years inclusive, but excluding the year 1926*.

Reference to the tables will show, as was pointed out in last year's report, how little variation there has always been in this rate so far as the Malay community is concerned.

The rate for Chinese has decreased by nearly 10 per mille from the record figure for the previous year but can still be considered a satisfactory rate and a remarkable advance on the rate found at the previous censal year, namely, 17.1 per mille.

The rate for Indians, 32.3 per mille, is well above that for 1930 and indeed constitutes a record for this race; and this in a year when the country lost a considerable portion of its Indian population, including female dependants.

Of the total, 30,028 were males and 27,429 were females giving a birth sex ratio of males to females of 109: 100.

A fact brought out by the recent census is that while considerable numbers of the Sakai population have now come to adopt a more settled mode of life there is still an aboriginal nomadic population of 26,287 persons, figures for which were obtained by special Sakai census expeditions.

DEATHS.

Some 32,871 deaths were recorded, a decrease of 8,723 or 22 per cent. on the 1930 total.

The crude death-rate is calculated at 19.1 per thousand living persons as compared with 24.1 in 1930 and 28.5 in 1921.

The rate for 1931 is the lowest ever recorded and may be assumed to mark a definite improvement in the state of the public health generally. It must be remembered, however, that a large number of decrepits or weakly persons have been repatriated.

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* The records of vital statistics for the year 1926 for the State of Pahang were lost in the great flood.

The death-rate among the Indian population as a whole was 20.5 per mille as against 21.8 last year and the rate for the estate population (including dependants) 15.8 per mille as against 20.6 in 1930.

It is the Chinese race that has mainly contributed to this fall, the death-rate in their case being reduced by over eleven per mille from 30.4 to 18.9, but the rate is also improved in the case of Malays by 1.6 per mille, and Indians by 1.3 per mille.

The decrease in the Chinese rate is especially remarkable as it was noted last year that the rate had gone up from 26.8 in 1929 to 30.4 during 1930.

These points are brought out in detail in the following tables:

TABLE IV.

DEATH-RATES IN THE F.M.S. ACCORDING TO RACE FOR 1931.

	Malay.	Chinese.	Indian.	All races.
1921	25.4	26.8	37.2	28.5
1922	24.3	24.6	29.7	25.6
1923	24.6	23.5	24.9	24.1
1924	24.2	23.3	21.9	23.2
1925	22.6	23.9	22.8	22.9
1927	26.4	34.1	32.9	30.7
1928	24.4	30.6	30.2	28.0
1929	21.8	29.6	23.4	24.6
1930	20.4	30.4	21.8	24.1
1931	18.8	18.9	20.5	19.1

TABLE V.

SUMMARY OF DEATH-RATES IN THE F.M.S. PER MILLE ACCORDING TO RACE AND STATE FOR 1931.

State.	Malays.	Chinese.	Indians.	Non-Asiatic.	Others.	All races.
Perak	18.5	19.1	19.7	5.0	16.8	19.0
Selangor	14.1	18.2	19.8	5.8	4.9	17.5
Negri Sembilan	20.0	19.5	24.3	8.0	2.3	20.5
Pahang	23.8	19.8	23.0	5.0	12.3	22.5
F.M.S.	18.8	18.9	20.5	5.8	8.1	19.1

If the death-rates taken by States and races are examined it will be seen that, as regards Malays, Pahang had the highest rate (23.8) while Selangor had the lowest (14.1).

The 1931 rates for Chinese were nearly even throughout the Federation, whereas Perak had considerably the highest rate during 1930. In the case of Indians, Negri Sembilan shows the highest rate (24.3), compared with Pahang's 41.8 in 1930. Perak again enjoyed the lowest rate (19.7), although the rate in Selangor was only one point higher. The lowered rate for Pahang, from 41.8 to 23.0, is a very satisfactory feature of these records.

Among non-Asiatics (37 deaths among a population of 6,392) the rate rose slightly from 4.6 in 1930 to 5.8 this year.

INFANT MORTALITY.

The ratio of deaths among infants (i.e., persons under one year of age) to every thousand live births was 139 as compared with 163 in the previous year.

The following table gives particulars of these rates as they affect the principal races in the Federated Malay States. No rates are shown for either Europeans or other non-Europeans as the numbers involved in each case are too small to allow of a reliable rate being calculated :

SUMMARY OF INFANT MORTALITY RATES IN THE F.M.S. ACCORDING TO RACES AND STATES FOR THE YEAR 1931.

	Malays.	Chinese.	Indians.
Perak	122	138	167
Selangor	102	130	144
Negri Sembilan	146	167	158
Pahang	169	157	145
Average rate	135	148	154

Taking the peak year of the last decennium, when a rate of 203 was recorded, a progressive and very marked fall from that figure can be seen amounting to a 31.5 per cent. decrease or a reduction of nearly one-third of the infant mortality rate as recorded in 1927.

This is very satisfactory so far as it goes but it must be kept in mind that still one quarter of all the deaths in the Federated Malay States are infant deaths. The rate in England during 1930 was 60 for every thousand living births.

The rate among Malays was again the lowest among other races, but the rate among Malays in Pahang (169) was the highest rate among any nationality.

The rate, by races, has fallen in each case compared with the 1930 figure.

MARRIAGES.

As there is no registration of Chinese marriages and the registration of Hindu marriages is not compulsory, the number of marriages cannot be determined.

CHAPTER IV.

Health.

The health of the country showed a great improvement during 1931. There was a reduction in the total number of deaths, while figures for hospital admissions show a corresponding great reduction.

There can be little doubt that a large part of this apparent improvement must be ascribed to the fact that large numbers of labourers, both Indians and Chinese, were repatriated during the year. Among these were, of course, very many comparatively unhealthy, or actually sick or decrepit, persons, who would have been likely to swell the total of deaths and hospital admissions, had they remained in the country.

On the other hand there is good reason for believing that apart from any question of repatriation the year was healthy. This is shown by a marked improvement in morbidity figures for communities unaffected by emigration, e.g., the Malay population.

Since malaria is the predominant cause of sickness and death in the Federated Malay States, and since the records for 1931 show a very great reduction in the number of malarial cases, it is a fair statement to say that the year was comparatively healthy because there was less malaria. It is to be noted, however, that apart from those diseases which may be associated with, or may be mistaken for, malaria, there was a lower incidence of other diseases, e.g., enteric fevers, which are not usually directly connected with malaria.

The following table sets out the principal causes of death in the population of the four States of the Federation during 1931:

SUMMARY OF PRINCIPAL CAUSES OF DEATH ACCORDING TO STATES FOR THE YEAR 1931.

State.	Causes of Death.														
	Enteric fever.	Typhus fever.	Relapsing fever.	Malaria.	Fever (type not diagnosed).	Smallpox.	Diphtheria.	Influenza.	Cholera.	Dysentery.	Plague.	Acute poliomyelitis.	Meningococcal meningitis.	Tetanus.	Tuberculosis of the respiratory system.
Perak ...	47	1	...	687	5,700	3	16	18	...	234	..	...	3	46	586
Selangor ...	16	27	...	411	2,646	...	11	19	...	282	...	...	3	27	500
N. Sembilan ...	12	2	...	261	1,387	...	1	23	...	113	..	...	...	17	265
Pahang ...	12	2	...	157	1,931	...	1	7	...	34	...	...	...	5	173
Total ...	87	32	...	1,516	11,664	3	29	67	..	663	...	...	6	95	1,524

SUMMARY OF PRINCIPAL CAUSES OF DEATH ACCORDING TO STATES FOR THE YEAR 1931—(*cont.*)

State.	Causes of Death.										Grand total.
	Other forms of tuberculosis.	Syphilis.	Cancer.	Beri-beri.	Convulsions (non-puerperal 5 years and over).	Convulsions (under 5 years of age).	Diseases of the respiratory system.	Diarrhoea and enteritis.	Ankylostomiasis.	Other diseases.	
Perak ...	75	48	36	62	14	1,577	745	212	27	4,504	14,641
Selangor ...	21	35	16	110	20	1,350	1,061	431	14	367	9,367
N. Sembilan	4	20	13	102	4	569	633	144	11	1,221	4,802
Pahang ...	...	1	3	78	3	438	347	156	39	674	4,061
Total ...	100	104	68	352	41	3,934	2,786	943	91	8,766	32,871

PREVAILING DISEASES.

Malaria.—This remains the principal disease of the country, in spite of the continuous concentrated effort for many years past to eliminate it. It is impossible accurately to assess the number of deaths due to malaria annually, since in only a small proportion of the total deaths is an accurate diagnosis possible. Deaths reported from Government hospitals as due to malaria may be accepted as correct, but it is impossible to say how many of the deaths registered elsewhere under the general heading "fever" are actually cases of malaria.

The following figures for the last five years are significant and encouraging:

	Deaths registered as due to "fever".	Deaths recorded in Government hospitals as due to malaria.
1927	20,736 ...	2,543
1928	20,053 ...	2,637
1929	16,968 ...	1,795
1930	16,721 ...	1,713
1931	13,180 ...	1,065

Preventive measures against malaria are now established throughout the Federated Malay States. They may be summarised as follows :

(*a*) Notification of cases and investigation of conditions associated with fresh infections;

(*b*) Routine and special surveys of anopheline breeding: In urban areas and for half a mile outside, endeavours are made to control the breeding of all species of anophelines and, even where possible, of culicines. The principle adopted in connexion with towns is to subdivide such areas as are under anti-malarial control in such a way as to ensure the full examination of each area at least once a week;

(*c*) Temporary and permanent anti-larval measures: Additions to permanent anti-malarial drainage were carried out in the larger centres of population particularly in Kuala Lumpur, Kuala Kubu Bharu, Sungei Buloh Leprosorium, Tampin, Kuala Lipis and Raub. But the general and widespread depressed economic position prevailing considerably limited the scope of this work during the year. Temporary anti-malarial work also had to be considerably curtailed, new work or extensions being reduced to the minimum;

(*d*) Free distribution of quinine;

(*e*) Periodical inspection of Government and estate labourers;

(*f*) Propaganda and education;

(*g*) Special research, by the staff of the Institute for Medical Research, Kuala Lumpur, Health Officers, and others: The problem of malaria at Cameron Highlands was the subject of special investigation.

Dysentery and Diarrhoea.—This group of diseases was responsible for 1,606 deaths during the year, or approximately 5 per cent. of the total deaths: this compares with 2,440 deaths in 1930, or 5.9 per cent. of the total for that year. The death-rate is 141.6 per 100,000 of the population.

Pneumonia.—This disease is still responsible for a very heavy toll of life, 8 per cent. of the total deaths being registered as due to pneumonia. Deaths so recorded numbered 2,786, a death-rate of 1.6 per mille compared with 1.8 in 1930. The case mortality rate in Government hospitals, though lower than in previous years, still remains not much below fifty per cent.: but it must be remembered that many patients only seek admission at a late stage of the disease.

Tuberculosis.—Pulmonary tuberculosis must be considered one of the gravest causes of sickness and death in the Federated Malay States, especially in the town population. It is impossible to estimate the total number of cases, and it is probable that many fatal cases are registered under other headings. But a study of the figures over a period of years does not show that the incidence of the disease is increasing. The records of deaths occurring in Government hospitals are likely to be more accurate than records of deaths occurring elsewhere, so that the following table may be taken as some indication of the comparative incidence of the disease during the last ten years. It must be remembered that the population of the country has been increasing during this period, but that the favourable figure for 1931 should be discounted by the abnormal repatriation then occurring.

1922	1,062
1923	1,006
1924	1,037
1925	1,051
1926	995
1927	1,118
1928	1,074
1929	1,078
1930	1,061
1931	975

Leprosy.—The average number of cases of leprosy annually detected and segregated in the Federated Malay States is in the neighbourhood of three hundred. The opening of the new Leper Settlement at Sungei Buloh has proved to be a great step forward in the treatment of the disease. It has been possible to release a certain number of cases as non-infective, and it is hoped that this will encourage other early cases, as yet undetected, to apply for treatment. The number of voluntary applications for treatment is encouraging.

Venereal Diseases.—The problem of venereal disease has received special attention in Malaya. For some years the number of cases applying for treatment showed a large annual increase, which was ascribed to the intensive efforts made to reach as many sufferers as possible. Now, at last, the total number of cases is decreasing. It may at least be hoped that this decrease represents an actual decrease in the incidence of disease, as the result of intensive efforts at treatment, associated, perhaps, with the recent measures taken for the suppression of brothels. The figures for the total number of cases of venereal disease treated in the Federated Malay States during the last five years are as follows:

1927	25,744
1928	35,366
1929	40,802
1930	35,734
1931	31,817

HEALTH OF THE LABOUR POPULATION.

The only class of labour for which special health statistics are available is the labour employed on agricultural estates. There was a great improvement in the figures for 1931, the death-rate recorded being 7.8 per mille compared with 10.6 for 1930. It must be remembered that it is this class of labour which has been most affected by repatriation; at the same time there is clear indication of a more satisfactory state of health generally during the year.

HOSPITALS AND OTHER MEDICAL INSTITUTIONS.

The following table shows the hospitals maintained by the Medical Department, the average daily number of patients in each, the total number of patients admitted during the year, the total number of deaths, and the death-rate per hundred admissions:

Hospitals.	Average daily No. of patients.	Total No. of patients admitted.	Deaths.	Deaths per hundred admissions.
I.—PERAK.				
Ipoh, District	450	10,632	880	8.27
Taiping, General	123	2,961	274	9.25
,, District	258	4,109	303	7.37
Batu Gajah	168	3,655	305	8.34
Kuala Kangsar, District	184	2,312	143	6.14
,, ,, Women's	75	1,668	103	6.17
,, ,, Malay	30	717	15	2.09
Teluk Anson, General	152	4,269	315	7.37
Kampar, District	232	3,664	391	10.67
Tapah, District	162	2,926	185	6.32
Parit Buntar, District	84	2,050	131	6.39
Tanjong Malim, District	51	1,522	81	5.32
Sitiawan, District	53	2,376	125	5.26
Sungkai, District	34	950	47	4.94
Grik, District	16	411	24	5.84
Klian Intan, District	22	520	52	10.00
II.—SELANGOR.				
Kuala Lumpur, Bungsar	17	505	8	1.58
,, ,, Tanglin	121	3,771	258	6.84
,, ,, District	623	8,342	1,028	12.32
,, ,, Malay	73	1,645	43	2.61
Klang, District	158	4,041	364	9.00
Kajang, District	115	2,340	192	8.20
Kuala Kubu, District	68	1,200	16[illegible]	13.41
Serendah, District	79	1,723	112	6.50
Kuala Selangor, District	20	647	48	7.42

Hospitals.	Average daily No. of patients.	Total No. of patients admitted.	Deaths.	Deaths per hundred admissions.
III.—NEGRI SEMBILAN.				
Seremban, 1st Class A Wards	7	189	3	1.58
Seremban, General	312	6,432	517	8.03
Kuala Pilah, District	212	3,110	222	7.13
,, ,, Women's	70	1,246	138	11.04
Tampin, District	103	1,902	167	8.78
*Port Dickson, District	74	833	98	11.76
Jelebu, District	33	734	45	6.11
IV.—PAHANG.				
Kuala Lipis, General	98	2,350	150	6.38
Kuantan, General	136	2,251	159	7.06
Bentong, District	103	2,017	165	8.18
Raub, District	65	1,395	116	8.31
Mentakab, District	42	1,053	60	5.69
Pekan, District	25	439	10	2.27
Kuala Rompin	1	30	3	10.00

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries), apart from those treated at special institutions such as Infant Welfare Centres, Venereal Disease Clinics, etc., was 644,065.

Infant Welfare Centres.—There are six centres at Kuala Lumpur, Klang, Ipoh, Taiping, Teluk Anson and Seremban. The total number of attendances during the year was 169,992. In addition to the work done at the centres themselves, a very great number of visits were paid by the staff to the homes of the people, for the purpose of instruction and assistance in maternity and child welfare.

Central Mental Hospital.—It is satisfactory to report that the number of patients discharged from this institution during 1931 was greater than in previous years, while the number of admissions was less. For the first time there were fewer patients under treatment at the end of the year than at the beginning, instead of the large increase annually occurring in recent years. The mortality was also lower. The actual figures for the last five years are shown below:

	Admissions.	Discharges.	Deaths.
1927	900	414	173
1928	903	495	174
1929	983	566	226
1930	972	482	197
1931	880	747	188

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* **NOTE.**—Tuberculosis cases are transferred to this hospital.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or Urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type;

however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

Town planning schemes have been approved or are being prepared for all the chief towns.

HOUSING OUTSIDE SANITARY BOARD AREAS.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part Estate or Mine Managers and fairly well-to-do Asiatics, but their houses are as a rule of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

Building loans at 6 per cent. interest may also be obtained from Government funds provided sufficient security is given for the recovery of capital and interest in case of default.

CHAPTER VI.

Production.

MINERALS.

in.

The export of tin-ore, reduced to a metallic basis, and of block tin during the year was 51,250 tons compared with 62,065 tons in 1930 and 67,041 tons in 1929.

The export of tin-ore represents about 99.4 per cent. of the total. The 1931 exports were 10,815 tons (17.4 per cent.) lower than those of 1930.

The export duty (in millions of dollars) was 5.5 in 1931, 9.1 in 1930 and 14.5 in 1929.

rice of tin.

On 22nd and 28th December was recorded the highest price during the year, namely, £144.17.6 per ton, and on 2nd June the lowest £102, but the later prices with sterling at par would have been very little above that figure.

It was only natural that the market reacted to the introduction of restriction; and although this reaction was not so marked as anticipated by optimists, the effect has been to give a steady rather than a fluctuating market. Undoubtedly the exceptionally low consumption by America was the cause of the continued low prices. It was fortunate for Malaya that Great Britain decided to come off the gold standard, as this enabled local producers to obtain a premium for their ore. It has been estimated that as a result the miners received during the last quarter of the year, an extra £350,000 for their ore and the Government £45,000 more in tin duty.

The following table gives figures of prices ruling during the last seven years in dollars per pikul :

—	1925.	1926.	1927.	1928.	1929.	1930.	1931.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Highest ...	145.50	157.50	159.00	131.50	115.50	92.25	71.37½
Average ...	131.77½	144.50	144.93	114.18	104.37½	72.89	60.29
Lowest ...	116.00	131.75	127.37	103.63½	89.25	54.25½	50.37½
Fluctuation	29.50	25.75	31.63	27.87½	26.25	38.12½	21.00

In January, 1931, the visible supplies officially recorded totalled 43,200 tons and in December 50,938 tons, an increase of 7,738 tons (17.9 per cent.).

The "carry-over" in the Straits Settlements on 1st January, 1931, amounted to 4,483 tons and on 31st December to 8,293 tons of tin, an increase of 3,810 tons, the totals of the visible supplies and the "carry-over" at the beginning and end of the year being 47,683 and 59,231 tons respectively.

Tungsten or

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows for 1930 and 1931 :

	Wolfram.		Scheelite.
1930	65 tons	...	784 tons
1931	Nil	...	368 ,,

Gold.

The production of gold was 29,462 ounces compared with 29,597 ounces in 1930.

The Raub Australian Gold Mining Coy. Ltd. produced 24,728 ounces compared with 24,012 ounces in 1930.

Exports amounted to 26,558 ounces.

Coal.

The production of coal from the Malayan Collieries Ltd., Selangor, was 402,355 tons, a decrease of 163,218 tons compared with the previous year; consumption was as follows :

	Tons.
Federated Malay States Railways	185,090
Mines	156,942
Other Federated Malay States Consumers ...	32,185
Exported	253
Consumed at the Collieries	27,885
Total ...	402,355

There is no other mine producing coal in the Federated Malay States.

Labour.

The labour force engaged in mining (including dulang pass holders) was 65,777 at the end of the year. The figures for the preceding three years were :

1930	89,517
1929	113,415
1928	119,550

This total does not include labour employed on the extraction and transport of firewood.

The classification of labour was as follows :

Contract	12,653
Wages	30,804
Tribute	13,560
Dulang	8,739

the extent of contract labour being 19.2 per cent. of the total labour force.

Approximately 37 per cent. of the labour force (excluding dulang pass holders) find employment on mines in the hands of Europeans.

Approximately one-fifth of this force is on contract (chiefly engaged on lode mining) and the remainder on wages.

AGRICULTURE.

Agriculture shares with mining the position of primary importance in the economy of the Federated Malay States. It is carried on by representatives of practically all nationalities, European and Asiatic, on properties ranging from the small holdings of one half to five acres owned by Asiatics, to large estates of between five hundred and five thousand acres.

Agricultural crops can be classified in three categories. Those grown both on estates and on small holdings; those grown only on large properties; and those grown exclusively on small holdings by Asiatics. The first category includes the major permanent crops, rubber and coconuts, with which as catch crops, coffee, bananas, pineapples or tapioca may be grown; it also includes tea, which is in its infancy as an estate crop in Malaya. The second category is confined to oil palms. The third comprises the important rice crop, minor food crops such as maize and ground-nuts, fruit, vegetables, arecanuts and tobacco.

A.—CROPS GROWN BY EUROPEANS AND ASIATICS.

Rubber.—This crop is grown almost exclusively for export, though a small quantity is absorbed by a Singapore rubber goods factory.

The total area under rubber in the Federated Malay States at the end of the year 1931 was estimated at 1,506,972 acres made up as follows :

	Holdings 100 acres or over.	Holdings under 100 acres.	Total.
Perak	273,136	250,166	523,302
Selangor	341,467	154,854	496,321
Negri Sembilan	272,053	81,142	353,195
Pahang	58,592	75,562	134,154
Total	945,248	561,724	1,506,972

Production on estates of over 100 acres was :

	Tons.
Perak	44,781
Selangor	53,141
Negri Sembilan	37,840
Pahang	5,695

Production on small holdings for each of the individual States is not available, but the total estimated production for the Federated Malay States was 105,378 tons, making a grand total of 246,835 tons.

The estimated area newly planted with rubber was as follows :

	100 acres or over.	Under 100 acres.	Total.
Perak	591	1,371	1,962
Selangor	1,362	822	2,184
Negri Sembilan	980	830	1,810
Pahang	2,048	303	2,351

Since no new alienations of land for rubber planting were made during the year, additions to the planted area have, so far as is known, been confined to land alienated before September, 1930.

During the year it was estimated that 16,751 acres were established with budded rubber trees of proven clones. The necessary budwood was largely obtained from local multiplication nurseries, imports from Netherlands India showing a further considerable decline, while local sales of budwood and budded stumps to foreign countries increased.

The total area of budded rubber in the Federated Malay States at the present time is estimated to be 73,034 acres.

On certain estates fields giving low yields owing to the incidence of root diseases or other causes have been cleared of their old rubber trees and replanted with budded stocks.

Recently collected statistics show the following classes of ownership of rubber estates exceeding 100 acres in the Federated Malay States :

Class of ownership.	Non-Asiatic.		Asiatic.	
	Number of estates.	Area.	Number of estates.	Area.
Limited liability companies ...	519 ...	766,701 ...	17 ...	13,920
Privately owned	116 ...	34,886 ...	432 ...	115,380
Private limited liability companies	18 ...	11,752 ...	4 ...	2,609

In the case of a limited liability company the shareholders may be of all nationalities, but the classification indicates the nationality of the majority of shareholders or of those holding the controlling interest as shown by the country in which the company is registered. Private limited liability companies by reason of their articles of association more closely resemble private than public ownership.

The sale price of rubber in 1931 declined even further than in 1930. The average Singapore price of ribbed smoked sheet for the year was 9.78 cents per lb., the highest price being 13¼ cents in January and the lowest 7¼ cents in August and September. These prices were below the cost of production on many properties.

Tapping was entirely discontinued on an increasing number of estates throughout the year and on many properties of intermediate size employing a small labour force. Such areas were either abandoned entirely or else left in charge of a watchman with occasionally a few labourers to keep down the growth of rank "lalang" grass. On some of the larger estates only the more productive areas were tapped, while curtailment of field work was becoming more noticeable. Although tapping on the share system was still common on small holdings, the number of owners who tapped their own trees increased steadily. Tapping was continuous and bark removal excessive on holdings whose owners had no other source of livelihood. On the other hand, owners with other sources of income, especially those possessing rice land, only tapped their trees intermittently to supplement their other sources of income. Thus, while the standard of living among rural Malays has been simplified, it is only those who are entirely dependent on their rubber land who have suffered real hardship. As was to be expected in the circumstances the standard of upkeep and general sanitation on small rubber holdings showed marked deterioration.

It was estimated at the end of the year that the total area out of tapping in the Federated Malay States was 131,586 acres, of which 42,062 acres were on estates which had entirely ceased tapping. This does not include 42,883 acres rested owing to rotational systems of tapping.

Records of bark consumption, yield, bark reserves and bark renewal were commenced in August on small holdings in the Federated Malay States as well as on holdings in Johore and the Straits Settlements. These records will be maintained for twelve months and will then be summarised. A special grant of $10,000 to provide the necessary staff and other expenditure was made from the funds at the disposal of the Rubber Experiment, Research and Propaganda Committee.

Of rubber diseases that most in evidence was Mouldy Rot of the renewing bark (*Ceratostomella fimbriata*). This disease spread considerably owing to the migration of dismissed tappers from infected areas to other localities previously healthy. Its control, especially in the wetter weather, also proved difficult, since owners could not usually afford to cease tapping or even in many cases to purchase efficient disinfectants, although these were rendered available at cost price through the officers of the Agricultural Department.

Research work in relation to the rubber industry has been continued by the Rubber Research Institute, the activities of which have been maintained at full strength. Special attention has been given to increasing the efficiency and lowering the cost of factory work for the production of standard smoked sheet and to possible rubber mixtures for road surfacing. Work on bud-grafting and clone selection and investigations relating to various diseases have been continued.

Coconuts.—There has been but little change in the area planted with coconuts as given in the report for 1930 when the figures obtained from the census conducted by the Agricultural Department in that year were as follows:

	Acres.
Perak	108,940
Selangor	110,294
Negri Sembilan	5,966
Pahang	14,530
	239,730

Of this, about 177,000 acres are in bearing.

The average Singapore prices of copra of "Sundried" and of "Fair Merchantable" qualities during the year were respectively $5.09 and $4.64 per pikul as compared with $7.80 and $7.45 in 1930. The highest price for "Sundried" was $6.15 in March and the lowest $3.70 in June. In the last two months of the year, there was a slight recovery to $5.90.

Local prices in the coastal villages for copra prepared on primitive kilns from nuts grown by small holders have ranged from $2.50 to $4.50 per pikul and the prices of nuts for copra making from 80 cents to $1.80 per hundred. In the inland villages nuts for eating purposes sold at prices averaging about 5 cents each and varying from 2 to 10 cents according to the size of the nuts and the supply locally available; in many of the inland districts nuts have to be imported from the coastal areas to meet the local demand.

Net exports of copra from the Federated Malay States were 65,583 tons, valued at $5,504,490.

It is difficult to form even a rough estimate of the total production of coconuts in the Federated Malay States. While it is true that some 90,000 acres of estates together with well-defined blocks of small holdings are situated in the coastal districts of Perak and Selangor, it has also to be remembered that a few palms are commonly planted near the dwellings of many Malays and other Asiatics throughout the country. The crops produced on estates are utilised almost entirely for the production of copra, but in the coastal districts the crops from small holdings are used both to satisfy the local demand for fresh nuts and for conversion into copra, while nuts produced in the inland districts are all consumed fresh. Moreover, a small portion of the copra made is purchased by two oil mills in Selangor, the oil and cake from which are not exported. Consequently the known exports of copra have little relation to the total production of nuts, more especially as the crop of nuts per acre and the number of nuts per pikul of copra are subject to wide variations.

The standardised coconut experiments laid down in 1930 on five estates in the Federated Malay States and two in the Colony have been continued but have not yet been in progress long enough to give definite results. Selection, cultivation, manuring and cross-pollination experiments have been continued at the Experiment Station, Klang, and on Carey Island.

Investigation on improved methods of preparing copra, which are being undertaken with financial assistance from the Empire Marketing Board, have commenced to give valuable information.

The officer engaged on this work visited Ceylon in August to make a comparative study of methods of coconut cultivation and copra preparation in that island. A report giving the results obtained to the end of 1931 is in the press. It has been definitely established that Malayan copra is inferior in quality to that prepared in Ceylon and that this inferiority is due, less to climatic factors, than to careless harvesting of nuts on small holdings and to methods of preparation on properties of all sizes which frequently leave room for improvement. One of the chief contributory factors to the poorer quality of the copra produced is defective detail in the construction of the kilns used. Existing kilns on a number of estates have been found to exhibit one or more of such defects which can, however, as a result of these investigations often be remedied at a comparatively low cost. Kilns used by small holders, or middlemen manufacturing copra on a small scale, are usually very primitive; investigations are in progress with a view to evolving a standard design of small, cheap, but efficient kiln.

Enquiries into local marketing methods and associated economic factors indicated that the first steps towards improving local prices in the principal areas of small coconut holdings lie in the direction of preparation of the copra by the growers themselves, instead of sale of the nuts to middlemen manufacturers, and in improvement in the quality of the product by better methods of harvesting and by the use of small cheap kilns of approved design, erected in fairly large numbers to serve groups of neighbours throughout these areas. In Kuala Selangor district two or three members of the community have erected kilns designed by the Department of Agriculture and have prepared copra of improved quality, selling for prices which have not only given them a better profit on their own nuts, but have enabled them to purchase nuts from their neighbours at prices above those given by the local middlemen manufacturers.

The coconut beetle (*Oryctes rhinoceros*) was kept under control throughout the year by the usual methods of destroying suitable breeding places. The nettle caterpillar (*Setora nitens*) appeared again in one district in the first half of the year and on one or two estates required special efforts on the part of the managers to effect its control.

Tea.—It was estimated that the total area planted with tea at the end of 1931 was 1,580 acres as compared with 1,244 acres in 1930. Of this total, 609 acres were planted on the uplands mostly on or near Cameron Highlands and 971 acres on the lowlands. The planted area comprises a few estates not yet in bearing, and a number of Chinese small holdings, mostly in Selangor, which provide green tea prepared by the Chinese method for local consumption by Chinese labourers. This tea is sold at prices varying from 40 to 60 cents per kati for the first quality and 24-30 cents per kati for the second quality. Demonstrations given to these Chinese growers on the Government Experimental Plantation, Serdang, led to considerable improvement in their plants owing to better cultivation and manuring and the use of a cover crop.

The areas planted with tea on the Government Experimental Plantation at Cameron Highlands in the uplands and with lowland tea at Serdang were extended during the year. The factory at Serdang was completed and put into operation. The factory building at Cameron Highlands was completed and the machinery had arrived and was ready for erection at the end of the year. Lowland tea of satisfactory quality was manufactured regularly at Serdang during the second half of the year. It found a ready market locally at 60 cents per lb. which was the same as the price given for tea produced on a lowland estate in Kedah.

Coffee.—The total area planted with coffee was estimated to be 7,784 acres, being approximately 2,500 acres more than was recorded in 1930. A considerable portion of this area is interplanted with rubber. Total production is not known. Prices in Singapore for Robusta coffee from Java have varied between $16 and $22 per pikul and for the lower grade coffee from Palembang between $11 and $16 per pikul. The corresponding local prices have not been sufficient to stimulate planting although the local demand is largely supplied by imports from Netherlands India.

A small crop of berries reaped from Kent's Arabian coffee at the Government Experimental Plantation, Cameron Highlands, produced coffee of satisfactory flavour.

In the lowlands the berry-boring beetle *Cryphalus hampei* and the leaf-eating caterpillars *Cephanodes hylas* did some damage.

Pineapples.—The total area planted with pineapples is estimated to be 6,292 acres as compared with 4,910 acres in 1930. Of this, 5,207 acres are in Selangor which contains the only canning factory in the Federation. In the first half of the year factory prices for fresh fruit fell as low as 50-80 cents per hundred, but recovered later to $1-$1.20 per hundred. Prices for 1½ lb. tins of good average quality pineapple cubes varied from $3 to $3.95 per case of 48 tins.

The Committee appointed by His Excellency the High Commissioner at the end of 1930 to enquire into matters affecting the industry presented its report which was published in September. Action to give effect to its recommendations has been under consideration.

While the exhibits staged in the United Kingdom by the Malayan Information Agency have done much to maintain the demand for Malayan tinned pineapples, they have also elicited additional evidence of the need for uniformity and improvement in the quality of the standard grades.

Further interest has been exhibited in the possible cultivation of pineapples as a sole crop. This and the possibility of preparing by-products from pineapple waste are matters of importance to the future of the industry, which can no longer depend on interplantings in newly opened rubber lands now that the planting of rubber has stopped. Nor will the pines grow in the shade of mature rubber trees.

Satisfactory progress has been made in planting up the various plots at the Pineapple Experiment Station in Singapore Island. Growth has, however, been slow and it is already clear that manuring will be essential whenever pineapples are grown on soil that has been under this or some other form of cultivation for several years.

B.—CROPS GROWN ENTIRELY ON LARGE ESTATES.

Oil Palms.—The total area planted with oil palms was returned as 31,971 acres, of which 292 acres were planted in 1931.

All oil and kernels produced are exported, practically none being consumed locally. In 1931 exports amounted to 4,177 tons of palm-oil valued at $948,661 and 641 tons of kernels valued at $101,866.

Prices for palm-oil declined further during the first half of the year from £21.10.0 in January to £13.10.0 in June. They then recovered slowly to £21.10.0 in December, the average for the year being £18.8.3.

Bulk transportation of the oil in tanks was organised among a group of estates in Selangor and was commenced at the end of the year. During the year 12 factories were in operation.

The stem rot disease which came to notice and was investigated by the department in 1930 appeared on one or two additional estates.

Experimental work in relation to oil palms has been continued at Serdang Plantation and certain estates. It includes selection and breeding of high-yielding palms and all aspects of field and factory work. There are indications that the use of phosphatic fertilisers will give a profitable increase in yield. Comparison of the percentages of oil obtained from the centrifuge and from the Krupp press in the experimental factory at Serdang at present indicates little, if any, difference in efficiency between the two methods of extraction.

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—This crop is grown by Malays throughout the Federation wherever there is suitable land in populated country. Local production supplies about one-third of the local requirements, Burma and Siam supplying the deficiency.

The estimated area under wet rice cultivation and the estimated yields therefrom for the season 1930-31 were:

	Area in acres.	Yield in gantangs.
Perak	85,540	24,561,000
Selangor	19,530	2,835,000
Negri Sembilan	29,590	7,189,000
Pahang	28,440	3,758,000
Totals	163,100	38,343,000

In Krian and the north of Perak late rains retarded planting and the crop, though better than that of the preceding season, was only moderate. In Selangor the planting was early and the crop was reduced by rain during the flowering and reaping season. Elsewhere fairly satisfactory crops were obtained, although floods in January destroyed about 1,000 acres of *padi* in the Pekan district of Pahang.

In addition to the area planted with wet rice, 15,830 acres were planted with dry rice and yielded a crop of 2,275,000 gantangs. This dry rice crop is of importance in districts where suitable land for wet rice is of very limited extent or where danger of floods before harvest renders the wet rice crop uncertain.

For the season 1931-32 weather conditions were on the whole favourable and satisfactory crops were expected in the more important rice producing areas, such as Krian, Negri Sembilan and parts of Pahang. Heavy floods at the end of the year caused serious damage to flowering rice along the Perak river, but areas in which the plants were younger, although submerged for a few days, did not suffer so much as was at first expected.

In the valley of the Pahang river, a considerable portion of the crop was harvested before the floods, but the later planted areas were destroyed. In Krian the collapse of the spillway of the irrigation reservoir in September caused a temporary shortage of water in part of the district, but this was not sufficiently prolonged to damage the crop unduly owing to a well-distributed rainfall in the last quarter of the year and the measures taken to conserve the supply of irrigation water still available. In Selangor faults in planting practice combined with adverse weather conditions and inundations of sea water resulted in an early but poor crop.

Experiments during the 1930-31 season on the control of rice stem borers by means of the egg parasite *Trichogramma minutum* showed sufficiently promising, though inconclusive, results to justify continuation of the work during the season 1931-32. Further observations have confirmed the opinion that stem borers are very prevalent in certain parts of the Peninsula, although the resulting loss of crop is not necessarily proportionate to the percentage of bored stems.

In localities where the water supply was deficient the growing rice-plant was often attacked by the insect *Scotinophara coarctata*. The *padi* fly, *Leptocorisa acuta* and another grain sucking insect, *Cletus punctiger*, did damage in some parts of Perak and Selangor, while the leaf hopper, *Sogata furcifera*, again appeared in Krian and other parts of Perak at the end of the year, but did serious damage in only a few localities, since it disappeared quickly after a few days of heavy rain.

In Krian the system of encouraging rat destruction by paying rewards for tails was superseded by a scheme designed to place a greater measure of responsibility for the control of this pest on the actual rice growers. This departure has proved successful. In other parts of the country the annual damage caused by rats is declining steadily as a result of the control measures now widely adopted.

Manurial experiments in accordance with the new scheme were conducted in Krian and at the Talang Experimental Station at Kuala Kangsar. The published results of several years work indicate generally that profitable increases in yield are only obtainable on land which without manure gives a yield much below the average. A further new scheme of experiments was laid down at these stations during the season 1931-32. At the Titi Serong Experiment Station in Krian hybridisation experiments together with selection and varietal tests have been continued.

Standardised test plots to determine the suitability of selected strains to local conditions were maintained during the year at Talang, Lenggong, Kuang, Kajang, Dong and Pekan. New plots were established at Bukit Gantang, Bruas, Rembau, and Temerloh.

Distributions of certain of the selected high-yielding strains were made and in the Krian district a scheme for the sale of selected seed to cultivators at cost price was organised, though with somewhat disappointing results.

The Committee, appointed by His Excellency the High Commissioner in July, 1930, issued its report in March, 1931. Action has already been taken on several of its recommendations and others are receiving attention.

Minor Food Crops.—Much greater attention is now being paid to the cultivation of minor food crops such as maize, yams, sweet potatoes, tapioca and ground-nuts. This extension is particularly noticeable in the parts of Pahang subject to flooding and also in districts where the land available for wet rice cultivation is limited and the predominant crop is rubber. Supplies of fresh vegetables for the town markets are grown almost entirely by Chinese market gardeners, though there is an increasing tendency among Malays to grow small quantities of vegetables for their own use. The necessity for growing greater quantities of food-stuffs has been emphasised by the Department of Agriculture which has distributed considerable quantities of planting material of good quality both from Serdang and from the smaller Agricultural Stations.

Tobacco.—Increased duties on imported tobacco have resulted in the planting of several hundred acres with this crop both by Malay small holders and Chinese gardeners in all the States. Prices have varied from $15 to $75 per pikul according to quality. While the plants often grow well, the curing of the leaf is at present unsatisfactory and much of the prepared tobacco is in consequence of low quality. It is made up into cheap cheroots or cut and used in native-made cigarettes or as pipe tobacco. The Department of Agriculture is conducting experiments with this crop at Serdang and also at several of the Agricultural Stations in different parts of the country. Important pests and diseases have already made their appearance. These include several leaf-eating caterpillars, the stem borer *Gelechia heliopa* and slime disease caused by *Bacterium solanacearum*. Investigations of control measures are in progress.

Agricultural Instruction.—In order to improve local methods of agriculture and encourage the planting of a wider range of crops the Department of Agriculture makes use of various methods of instruction and propaganda.

(*a*) Demonstration Stations: The Field Branch of the department proceeded with the programme of establishing additional small stations of some 10 acres each in various parts of the country, to serve for testing varieties, providing demonstrations and supplying planting materials of good quality. In addition to four stations already in existence, five more were established during the year at Selama in Perak, Cheras in Selangor, Rembau in Negri Sembilan and Kuantan and Temerloh in Pahang.

(*b*) School Gardens: There are 392 school gardens in the Federated Malay States, all of which were regularly supervised by Agricultural Field Officers during the year; a standard layout was introduced and general improvement in working was maintained. Considerable quantities of planting material were supplied from Serdang and from local Agricultural Stations.

(*c*) Publications: The publications in English issued by the Department of Agriculture have consisted of the monthly numbers of the *Malayan Agricultural Journal* together with seven special Bulletins. In addition, the quarterly journals in Malay and in Chinese have been published regularly and leaflets have been issued in Malay on various subjects.

(*d*) Rural Lecture Caravan: The Departments of Co-operation and Agriculture and the Rubber Research Institute of Malaya have jointly maintained this caravan which carries agricultural exhibits, cinematograph films on co-operation and agricultural subjects and lantern slides. The caravan visits villages at which lectures in Malay are given on agricultural and co-operative subjects illustrated by lantern slides and films in the evening. The van toured parts of all the three western States during the year. Good audiences were attracted and a number of enquiries for selected rice seed resulted.

(*e*) Agricultural Exhibition: The Malayan Agri-Horticultural Association held its eighth exhibition in Kuala Lumpur during August. Instructional exhibits were staged by the Rubber Research Institute and the Department of Agriculture.

Opening of School of Agriculture, Malaya.—In May, 1931, the School of Agriculture which had been under construction for the past two years was officially opened by His Excellency the High Commissioner. It is hoped that this Institution will in due course exert a beneficial influence on native agriculture in Malaya. The school comprises a teaching block with hostel accommodation for 80 students, quarters for the teaching staffs and the necessary out-buildings. The courses of training include a three-year course delivered in English designed to meet requirements of senior students, and a one-year course in the vernacular for junior students. They comprise teaching in the elements of science underlying agricultural practice combined with practical training in the agriculture of the more important crops. Areas cultivated by the pupils are attached to the school, while the experimental plantations are also available and are utilised in connection with the teaching. At the end of the year the total number of students at the school was 38.

LIVE STOCK.

The Federation continues to be very largely dependent on imports for the supply of meat and of other animal products.

In relation to milk supply, slightly increased interest in the question of the production of milk locally has been evinced, and during the year the Government Dairy at Fraser's Hill was opened by the Agricultural Department with the object of supplying fresh milk to the population at the hill station.

The dairy comprises about 32 cows, the majority of which are of the Friesian breed imported from South Africa. The dairy buildings have been constructed and designed in accordance with modern principles, and enable milk of high quality to be turned out. Bacterial counts by the Medical Institute show that the milk produced in the dairy falls easily within the limit of grade A milk.

Attempts by the Government to improve local breeds of poultry have been continued at Kuala Kangsar, and a number of young cock birds of good breed have been distributed in the villages.

Some discussion has taken place during the year regarding the desirability of establishing a stud farm for improving the breed of buffaloes in Pahang, while there has also been some discussion on the subject of a general policy towards the improvement of live stock in the Peninsula.

It must be agreed that the Federated Malay States are in general character not specially adapted for stock raising, but on the other hand there is every reason to suppose that a considerably larger proportion of the local requirements in the way of products of animal husbandry could be supplied from local sources.

The following figures have been compiled from returns obtained from various sources and subjected to cross checks and actual counts carried out by officers of the Veterinary Department whenever possible. The difficulties of collecting accurate figures are considerable, especially in the cases of small animals (goats, sheep, and even calves).

	Cattle.	Buffaloes.	Sheep and goats.	Pigs.	Horses.
Perak	19,490	17,891	35,355	47,515	171
Selangor	11,476	2,297	19,383	76,442	48
Negri Sembilan	8,709	10,329	19,437	16,400	24
Pahang	4,415	15,711	13,732	14,584	—
Totals, 1931	44,090	46.228	87,907	154.941	243

On a conservative basis these represent a value of about $10,000,000.

All animals entering the Federated Malay States from sources outside Malaya are liable to detention under observation on arrival, a measure which is enforced as a routine in the case of bovines, special provision being made for those intended for immediate conversion into meat and exemption being granted to railed animals that have already undergone quarantine in Padang Besar.

Imports showed a sharp decrease compared to previous years, in harmony with the prevailing economic situation. There was a general tendency to make more use of internal resources and to depend to a greater extent, for such items as meat, on local animals. The export of animals and animal products was, as usual, negligible, being represented only by hides and skins, the by-products of the meat supply. The following table illustrates the gradual decline in imports of live stock into the Federated Malay States over the period quoted:

	Cattle.	Buffaloes.	Sheep and goats.	Pigs.
1929	3,455	14,651	15,803	30,919*
1930	2,339	7.635	10,940	18,861*
First half, 1931	619	1,315	3,254	5,211*

FORESTS.

A large part of the land surface of the Federated Malay States is still covered with natural forest, which constitutes an economic asset of considerable potential value. It has been the policy of the Government to set aside an adequate proportion of the forest area for permanent timber production, and in the forest reserves, as they are called, cutting is strictly regulated in accordance with principles of silviculture. The working of the State land forests, which are destined ultimately for alienation, is subject to less drastic restrictions, but the grant of large concessions for destructive exploitation of forests is contrary to present policy except in cases in which a demand exists for the land denuded for other productive purposes.

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* Exclusive of Perak figures which are not available.

The replacement of the natural forest growth in the reserves, as it is removed by timber cutters, by new and more valuable forest crops under regulated management, is a Government enterprise and constitutes the chief business of the Forest Department, being carried on by the agency of a trained staff consisting mainly of Malays. All timber is sold standing, and the business of its conversion and extraction is carried on almost entirely by Chinese contractors and Chinese labour. The same applies generally to the collection of minor forest produce. There are small sawmill industries at Telok Anson in Perak, and in Pahang, and the former industry is particularly well situated for expansion and the development of an export market for Malayan woods. A large part of the output of timber is still converted by Chinese hand-sawyers and this method, though primitive, is likely to be useful for a long time to come in the process of converting natural jungle to regulated forest crops, which has to be carried out gradually and does not admit of intensive working.

The Federated Malay States as a whole are self-supporting in the matter of timber supplies and were, on balance, exporters of timber and firewood to the rest of the Peninsula to the value of $879,599 in 1931. With the exception of Selangor, in which State, owing to its earlier development, the accessible forests have been somewhat depleted, all the States are self-sufficing as regards timber supply and capable of developing an export trade in timber on a substantial scale. The present favourable opportunities for marketing, in the United Kingdom, the better grades of timber turned out by the sawmills have been under investigation during the year, and it is possible that the Federated Malay States industry may ultimately be able to compete in the wide range of Eastern markets now supplied by the Singapore sawmills, which derive their raw materials mainly from Netherlands India.

Progress with the formation of forest reserves proceeded normally and the year closed with 7,040 square miles reserved and 373 square miles proposed for reservation. Little further reservation is required in the Western States, but the area of reserves in Pahang is still low in relation to the total extent of that State.

The outturn of timber, firewood and charcoal during the year amounted to 6,011.581, 10,853,424 and 835.113 cubic feet solid respectively, representing decreases of 3.883,519, 7,447,376 and 343,837 cubic feet as compared with the 1930 output. Twenty-nine per cent. of the timber and 48 per cent. of the firewood output was derived from reserves. As regards minor forest produce there was a brief revival of the demand for gutta-percha that had been suspended during the previous year. The outturn of *jelutong* (a gum used as a basis in chewing gum manufacture), inferior *damars* and wood oil increased somewhat, but all other classes of minor produce showed a more or less substantial decrease on the output of the previous year.

Some small relief to the prevailing gloom has been provided by the development of an apparently flourishing match-making industry at Klang, and by the promising results obtained in a plywood and veneer plant at Batu Arang.

Among the features of the year's work worthy of note were the studies carried out by the Forest Engineer of the possibilities of providing better facilities for extraction and transport of timber and firewood from the forests, and of improving the standards of manufacture in the local sawmills. As a result of his investigations a new tramway, which has proved very successful in reducing transport costs, was laid in Parit reserve. The studies have disclosed great possibilities of increased efficiency in both the fields mentioned.

The Timber Branch of the Forest Department was re-organized at the close of the year on a simple basis providing an expert agency for purchase of the timber requirements of the Railways and other Government departments, and for assisting forest contractors in the marketing of their output. An agreement was reached with the Railways for the purchase through the reconstituted Timber Purchase Section of the whole of their timber requirements.

The work of the Forest Research Institute continued to make good progress, particularly in the fields of timber testing at the Timber Research Laboratories and silvicultural investigations. Useful work was also carried out by the Forest Chemist.

At the close of the year the senior staff of the Forest Department consisted of 42 officers exclusive of one probationer under training at the Imperial Forestry Institute. The locally engaged English-speaking staff consisted of sixteen in all, seven Extra Assistant Conservators and nine Sub-Assistants. The sanctioned strength of the subordinate staff was 526 exclusive of 94 clerks, 43 boatmen, nine temporary clerical subordinates engaged in the Timber Branch, the permanent labour force and menials.

A departmental code of instructions entitled the Malayan Forest Manual, embodying standing orders, rulings and precedents, was published during the year, and a quarterly technical periodical, the "Malayan Forester", was started, of which two issues had appeared by the close of the year.

FISHERIES.

The total quantity of fish landed in the Federated Malay States during the year was about 20,520 tons valued at $2,068,000. The market price of fish continued to fall and in 1931 was about half of what it was in 1929.

There are no steam trawlers engaged in the fishery business. The fishermen are mostly Malays or Chinese. Sometimes they own their own boats but more often they borrow the necessary equipment from the fish dealers. There are, of course, objectionable features in this system but up till now it has not been found possible to replace it with a better one.

An attempt in a small way was made at the Agri-Horticultural Show in Kuala Lumpur in August to stage a fisheries exhibit. Mostly fresh water fish of economic value were shown. Some brine frozen horse mackerel and other specimens of sea fish were also exhibited. Nets, fish traps and a collection of photographs completed the exhibit, the object of which was to arouse public interest in the fisheries of the country. The result was most encouraging and some thousands of people passed through the stand and displayed the greatest interest and curiosity concerning the exhibits.

MANUFACTURES.

There are but few important manufacturing concerns in the Federated Malay States. They include four aerated water factories, two match factories, five distilleries, one plywood factory, two pineapple canning factories, one cement works, and a few tile and brick factories.

CHAPTER VII.

Commerce.

In the year 1931, the economic depression continued with increased intensity. Prices fell to new low levels and countries such as the Federated Malay States whose income depends on the export of raw materials were the worst sufferers. The average price of tin during the nine years 1922-1930 was £225 a ton; last year it was £118. The average price of rubber during the same period was 1*s.* 4*d.* a lb.; last year it was 3*d.* The general situation improved slightly towards the end of the year.

The distribution of trade per head of the population was $134 as compared with $222 in 1930.

The total value of imports and exports (including re-exports, bullion and parcels post) for the last six years are as follows:

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1926	173,887,724	445,600,203	271,712,479
1927	176,161,194	339,925,603	163,764,409
1928	191,473,471	278,523,482	87,050,011
1929	201,393,405	349,012,595	147,619,190
1930	168,020,418	213,652,044	45,631,626
1931	106,201,211	125,177,183	18,975,972

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years is as follows:

IMPORTS.

Countries from which imported.	1929.	1930.	1931.
Singapore	35.12	35.25	34.72
Penang	20.47	17.70	17.27
Malacca	1.92	2.33	2.79
Unfederated Malay States	2.07	1.03	1.58
United Kingdom	14.04	16.70	14.37
British Possessions	6.16	7.14	7.88
Continent of Europe	5.42	3.90	4.79
Other Foreign Countries	14.80	15.95	16.60
	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1929.	1930.	1931.
Singapore	23.31	23.29	23.18
Penang	29.48	33.19	38.44
Malacca	1.89	2.97	3.79
Unfederated Malay States	.29	.52	.56
United Kingdom	12.73	13.79	9.14
British Possessions	1.34	.64	.88
United States of America	25.30	19.79	18.86
Other Foreign Countries	5.66	5.81	5.15
	100.00	100.00	100.00

The trade of the Federated Malay States falls into two categories, direct with foreign countries via Port Swettenham and Straits Settlements ports, and with merchants in the Straits Settlements. This trade is principally an export trade in raw materials—agricultural, forest, marine and mineral produce—in exchange for imports of food, tobacco, fuel oils, clothing and machinery. The principal export trade was with the United States of America and the United Kingdom; the principal import trade being with the United Kingdom, British India, Burma, the Continent of Europe, Netherlands India, Siam and the United States of America.

The foreign trade of Malaya as a whole amounted to $887 millions in 1931 as compared with $1,387 millions in 1930, a decline of 36 per cent. Of this, 14 per cent. was with the United Kingdom, 14 per cent. with British possessions and 72 per cent. with foreign countries. There was a general decline in the quantities and values of all articles imported or exported, with the exception of exports of tinned pineapples which increased in quantity, declining slightly in value. Exports of bullion and coin were notably high, amounting to $28 millions as compared with $14 millions in 1930, most of which was to the United Kingdom.

CHAPTER VIII.

Wages and Cost of Living.

There was a decline in general wage rates throughout the year as a result of the slump in tin and rubber. Wholesale commodity prices declined by 26 per cent., retail food prices by about 19 per cent. and the general cost of living by 15 per cent. for Asiatics, 11 per cent. for Eurasians and 6 per cent. for

Europeans, based on prices in Singapore. House rents declined generally; at Kuala Lumpur, the Federal capital, they were four and a half per centum less than in the preceding year.

The index numbers of the general cost of living at the end of 1931 as compared with 1914 and 1930, were as follows:

Standard.	1914.	1930.	1931.	+ or − in 1931: %
Asiatic	100	147.5	125.0	− 15.3
Eurasian	100	143.0	127.1	− 11.1
European:				
Non-official	100	149.7	139.9	− 6.5
Official	100	137.8	130.7	− 5.2

The difference in the index number of the European official standard is due to the non-inclusion of house rent.

The bulk of the labour in the Federated Malay States is employed on rubber estates and tin mines. For rubber estates the labour is recruited chiefly from Southern India, while on the mines Chinese are in the majority.

In 1928 (October) as the result of a wage inquiry in the coast districts of Selangor standard rates were fixed for Southern Indians in the coast districts of Selangor as follows:

a male labourer 50 cents a day;
a female labourer 40 cents a day;

these rates being based on a standard budget, including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. Standard rates for the inland districts of Pahang were fixed at 58 cents a day for each adult male and 46 cents a day for each adult female labourer. A subsequent inquiry was held in the middle of 1930 and standing rates were reduced to the following:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult male.
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult male.
37 ,, ,, ,, female.

Standard rates are the minima paid in Government departments. Indentured Javanese are paid at the rate of 50 cents a day for men and 40 cents a day for women. Free Javanese earn about the same as South Indian labourers. At the end of 1931 it was estimated that the cost of living, as far as foodstuffs and clothing were concerned, had declined by about 30 per cent. from October, 1928. From October, 1928, to the middle of 1931 the decline was about 27 per cent.

At the standard wage enquiry on the 29th October, 1928, for the coast districts of Selangor the current price of rice was 48 cents a gantang as against a price of about 23-26 cents a gantang in December, 1931. Rice is the staple article of diet. The amount consumed by a male adult is approximately five or six gantangs a month.

In certain districts where a standard rate of wages has not been laid down there has been a marked tendency towards an undue cutting of wages. But this has been checked partly by the steady stream of repatriation, which is always augmented as a result of a reduction in wages in any area, and partly by the decision of the Labour Department, which has been communicated to and unanimously approved of by the Council of the Planters' Association of Malaya, that a reasonable living wage will be insisted on even in the absence of a statutory minimum.

In connection with enquiries on a few estates where earnings were found to be unsatisfactory the labourers on interrogation declared that they preferred to remain on their places of employment as they said they could supplement their earnings sufficiently in various ways, e.g., by fishing, hunting, the collection and sale of firewood, and the growing of vegetables. Their reluctance to avail themselves of the facilities for free repatriation is partly due to the depressed conditions prevailing in South India.

The wages of Chinese labourers on rubber estates were slightly higher than those of Southern Indians.

Of the labour engaged in mines approximately 20 per cent. is on contract (chiefly engaged in lode mining) and the remainder are in receipt of wages.

A contract worker engaged in lode mining earns from 65 cents to $1.55 a day of eight hours.

Skilled workers on European mines receive 70 cents to $1.70 per day and unskilled 50 cents to 75 cents per day.

On Chinese mines skilled workers are paid 50 cents to 60 cents per day with food and unskilled 28 cents to 35 cents per day with food.

CHAPTER IX.

Education.

Financial.

The expenditure upon Education (including $474,761 spent by the Public Works Department on the building and upkeep of schools) was $4,102,261. Of this sum, $571,440 was paid in grants to English aided schools and $88,405 in grants to Chinese vernacular schools. The total revenue, derived mainly from school fees, collected by the department was $265.215. In addition the education rate realised $267,237.

Staff.

At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 51 and the female 14. This included administrative and teaching staff and miscellaneous appointments.

Higher education.

There are four higher local educational institutions open to students from the Federated Malay States, the King Edward VII College of Medicine, Singapore, Raffles College, Singapore, the School of Agriculture, Serdang, and the Technical School, Kuala Lumpur.

Raffles College provides a higher education in general subjects. Forty-two student teachers from English schools in the Federated Malay States were in residence during the year at Government expense. These students on the completion of their studies are employed as teachers in the Government and aided schools.

Details dealing with the instruction available at the School of Agriculture, Serdang, may be found in the chapter entitled "Production". The school is under the supervision of the Department of Agriculture.

The Technical School, Kuala Lumpur, provides a training that qualifies the students for the appointment of Technical Subordinate in one or other of the Government Technical Departments. Managed formerly by the Public Works Department, it was taken over by the Education Department at the beginning of the year.

Malay College, Kuala Kangsar.

The Malay College, Kuala Kangsar, trains probationers for the Malay Administrative Service and for various Government departments. At the end of the year there were 108 students, all boarders. The experiment of having student probationers for the Malay Administrative Service studying at the College continued to prove a success. The general health of the boys was good. The Medical Officer, Kuala Kangsar, visited the College regularly. He also gave lectures to the senior boys on practical physiology.

The Dental Surgeon, Federated Malay States, visited the College in July and November. Cricket, hockey, association football, tennis and fives were played regularly. The average strength of the Cadet Corps in 1931 was 2 officers and 53 other ranks. Training in drill, musketry and tactics went on steadily during the year. A short camp was held at the College in September. It was conducted by Lieut. Wright with the help of three instructors from the Service Company. The scouts made good progress during the year. The average strength was 54, together with 21 recruits.

Evening classes.

Evening classes were held only in Kuala Lumpur. The curriculum there comprised English, practical mathematics, machine drawing, coach drawing, locomotive and electrical engineering and workshop mechanics. In addition to these, science classes were started, one class in general science and the other in matriculation chemistry. Both these classes were well supported. For financial reasons evening classes in other centres were dropped.

Scholarships and free education.

The most interesting educational event of the year was the restoration of the Queen's Scholarships. It was decided that two scholarships be given yearly by the Federated Malay States Government, one a "close" scholarship for Malay subjects of the Ruler of one of the Federated Malay States or Malay British subjects, the other open to candidates of any race. The successful candidates, who are chosen by a Selection Board from amongst those who do best at a special competitive examination are sent to the United Kingdom to enable them to complete their studies at a University. The value of the scholarship which is tenable for six years varies from £150 to £500 per annum in accordance with the scholars' financial circumstances. Scholars are normally required to proceed to a residential College at Oxford or Cambridge so that they may have the advantage of the discipline and social life associated with those Universities. There was no Malay candidate at the 1931 examination.

Of the 18,286 pupils in English schools, 413 held Government scholarships, enjoying free education, board and lodging; 30 held other scholarships; 2,748 received free education from the Government and 344 free education from other sources. Thus 3,535, or 19.33 per cent., were provided with free education. All pupils in Malay vernacular schools receive free education.

English schools.

There were 23 Government English schools for boys, and 12 grant-in-aid English schools for boys and 13 for girls. The total average enrolment was 7,427, 6,196 and 4,663 respectively.

Normal classes.

There were normal classes for English school teachers in all the States except Pahang, where correspondence classes took their place. The new scheme which came into force on the 1st April, 1929, and which permits of different courses for primary and elementary teachers, worked well. At the annual examinations held in March, 1931, 131 (88 men and 43 women) passed; 48 men and 15 women completed the three-year course and became trained teachers. After the examination no new first year classes were started in Taiping, Kuala Lumpur or Seremban.

Sultan Idris Training College.

At the end of the year there were 388 students and one probationer at the Sultan Idris Training College for the training of Malay vernacular teachers. One hundred and twenty-eight completed their three-year course. The total expenditure was $147,060, two-thirds of which was defrayed by the Federated Malay States and one-third by the Straits Settlements. The curriculum comprises Malay language, Malay literature, Malay history, geography, mathematics, the theory and practice of teaching, hygiene, physical training, rural science and practical gardening, handicrafts, writing, drawing and religious instruction. The Translation Bureau housed in the College continued to publish school books and light modern literature for the Malays and to translate and revise pamphlets and documents for other departments; the cost of the Bureau, exclusive of special expenditure, was $10,869. Extensions were added to the six dormitories.

The strength of the College Company in the M.V.I., including recruits, was 219. The unit attended camp at Port Dickson; it was also inspected by His Excellency the General Officer Commanding and received a favourable report. There were 193 scouts, one of whom received a letter of commendation from Lord Baden-Powell, the Chief Scout, for his resourcefulness during a serious conflagration in the village of Layang Kanan, Perak.

Malay vernacular education.

The Malay vernacular schools are all Government institutions, the education provided being free. There were 450 schools for boys and 85 for girls with average enrolments of 36,506 and 5,118. The Malay teaching staff numbered 1,537. The Malay eagerness for the education of girls continued.

Javanese vernacular education.

In Pahang there was a Javanese school with an enrolment of 25 pupils. The Government grant amounted to $161.

Tamil vernacular schools.

There were 301 Tamil vernacular schools with an average enrolment of 10,656 pupils. A number of estate schools were closed during the year owing to the financial depression. Thirty-one schools had gardens attached to them.

Chinese vernacular schools.

Three hundred and fifty-five Chinese schools were registered. There were 870 teachers and 18,882 pupils of whom 4,488 were girls. Grants were paid to 118 schools. The training class for Chinese teachers was continued at Kuala Lumpur. There were 47 students in two classes. The two Government primary Chinese schools had between them an average enrolment of 363 pupils.

Technical education.

As previously mentioned the control of the Technical School, Kuala Lumpur, where apprentices to the technical departments of the various Malayan Governments are trained, passed from the Public Works Department to the Education Department as from 1st January, 1931. By the end of the year considerable progress had been made towards co-ordinating the training of the apprentices of the various departments and tentative syllabuses had been drawn up, and were being worked to, covering the various subjects taught. This school which appears to meet a very pronounced need contained 140 students at the end of the year.

At the end of the year the Federal Trade School at Kuala Lumpur had 92 students, as against 77 in 1930 and 64 in 1929. It is not possible to increase the numbers further with the present accommodation. Employment was found for 13 of the sixteen boys who left the school on the completion of their training. Three ex-students were sent to the Royal Air Force Base, Singapore, and very gratifying reports on their work have been received from the Officer Commanding. A platoon of Malayan Volunteer Infantry numbering 26 was raised at the school. It is hoped that they will eventually form a special unit for work with Motor Transport Columns.

There were 50 students at the Trade School, Ipoh, 42 being Malays. The average enrolment of the Trade School at Bagan Serai was 55. Carpentry classes are attached to eight Malay schools in Perak.

The Trade School at Rembau had an enrolment of 47 boys. Carpentry and wood work were taught in this school. The progress was satisfactory.

Recreation.

Every encouragement was given to pupils to participate in games organised by the schools. In the larger schools, inter-house competitions in association football, cricket and hockey were run with considerable success. Other games that found favour with the boys were badminton, basket-ball, volley-ball and rugby football. The gymnasia at the Anglo-Chinese School, Ipoh, and the Anderson School, Ipoh, were well patronised.

In girls' schools tennis and badminton increased in popularity and organised games were played.

Music. Music was taught at the Convent schools and a few candidates appeared for the examination of the Trinity College of Music (Theory and Practice). Singing was taught in the lower forms of all schools. Orchestras were formed by the pupils in the larger schools.

Art. Drawing and handwork were taught in all English schools. There was a considerable general improvement in the handwork.

Drama. Dramatisation formed a part of the English curriculum of all schools. The lower standards acted simple plays and dramatic stories. The senior boys and girls dramatised scenes from Shakespeare.

Orphanages. The custom of adoption among Malays, Chinese and Indians practically does away with the necessity of orphanages but such Indian orphans as cannot be traced to relatives are accommodated in the Home for Indians, Kuala Lumpur, an institution maintained by the Indian Immigration Committee. At present the number of such orphans in the Home is 18 boys and 8 girls. Such children are in demand for adoption by Indian families. The Roman Catholic Church maintains orphanages in the principal towns. The number in these orphanages is about 700. Government assists to the extent of $1 per month for each orphan not assisted in any way by relatives.

CHAPTER X.

Communications and Transport.

Posts, Telegraphs, Telephones and Wireless.

POSTS.

Postal facilities are provided in all the towns and larger villages in the Federated Malay States. There are 104 post offices at which officers of the Posts and Telegraphs Department are employed and 70 places at which postal business is transacted by station-masters and others acting as postal agents.

The number of posting boxes, exclusive of those at post offices and postal agencies, was 310 on the 31st of December; and 185 licences for the sale of stamps were issued during the year.

A new direct mail for Telok Anson from Negapatam was instituted as from the 10th of April; and the direct mail from London for Parit Buntar was discontinued as from the 23rd of October.

New direct mails were instituted between Gemas and post offices in Kelantan in September and November.

Certain motor mail services in Perak, Selangor and Pahang were revised and improved during the year.

A new Post Office Guide was issued in January, 1931.

Arrangements were made to accept insured articles for all offices in Kelantan as from the 28th of February.

A cash-on-delivery service was introduced with Netherlands India on the 9th of March.

The arrangement for the prepayment of Customs dues was introduced in the parcel post services with Australia, New Zealand and Egypt on the 1st of April, 1st of May and 8th of July respectively.

The Dutch air mail service between Netherlands India and Europe was changed from a fortnightly service to a weekly service in October and the opportunity was taken of forwarding an air mail by this service to Amsterdam and London once a week instead of once a fortnight. In November weekly air mail despatches were also made up for conveyance by this service to Bangkok, Rangoon, Calcutta, Baghdad and Cairo.

TELEGRAPHS.

Every post office is a telegraph office; and in addition telegraphs are installed at the Kuala Pahang postal agency. There are accordingly 105 telegraph offices in the country.

A new telegraph line was opened between Kuala Lumpur and Kota Bahru in Kelantan on the 26th of January; this enabled telegrams to be exchanged direct with Kelantan without having to make use, as formerly, of the lines of the Siamese telegraph system.

Experiments were made in September with the teleprinter telegraph instrument. The experiments were promising and steps were taken to order a number of teleprinters to equip the busy main line routes and to abolish Morse sounder operating on those routes. Increased use has also been made of typewriters on Morse sounder circuits for the reception of telegrams.

As from the 6th of November, all the telegraph traffic exchanged with Kuantan and Pekan in Pahang and forwarded through Kuala Lumpur, was transmitted by wireless direct instead of being forwarded to Raub for onward transmission from that office by land line.

Arrangements were made on the 1st of July for the acceptance from senders and delivery to addressees of telegrams by telephone.

The daily letter telegram service was extended to Canada, United States of America, Lithuania, Greece, Norway, Lettonia, Russia, Danzig and China.

A night letter telegram service was introduced between Singapore, Penang, Kuala Lumpur and Ipoh on the 1st of June.

The number of telegrams despatched and delivered was 651,243, a decrease of 144,661.

TELEPHONES.

There are 67 telephone exchanges in the Federated Malay States, all of which except Kuantan and Pekan on the East Coast of Pahang are connected to the Malayan telephone system. Kuantan and Pekan exchanges are connected with each other. A new telephone exchange was opened at Malim Nawar on the 20th of November.

The number of direct exchange lines connected to the telephone system at the 31st of December, 1931, was 4,753, a decrease of 428 as compared with 1930. There were also 2,358 miscellaneous circuits—e.g., extension lines, extension bells, private lines, private bell or alarm circuits and tell-tale clock circuits maintained by the Posts and Telegraphs Department—a decrease of 214. On the 31st of December there were 2,915 miles of telegraph and telephone lines, and 24,199 miles of overhead wires, of which 20,892 miles were telephone wires. In addition there were 210 miles of underground cable, the length of single wire in the cable being 16,093 miles. These figures do not include railway wires, nor the 123 miles of line (857 miles of wire) owned and maintained by the department in Johore.

The Kuala Lumpur automatic exchange was brought into service at midnight on the 23rd-24th May, at which time the old manual exchange was thrown out of service. The change-over was effected in 43 seconds with the minimum of inconvenience to subscribers.

The complete system of carrier current telephone channels providing long-distance communication between the trunk centres was brought into use on the 15th of December. Kuala Lumpur, Ipoh, Tampin, Singapore and Bukit Mertajam are now all in direct trunk communication with one another and by this means a greatly increased range of communication for subscribers to the telephone service has been provided.

Many new trunk and junction lines were constructed or reconstructed during the year; new underground cabling was undertaken; new telephone switchboards were installed at four exchanges, and additions were made to the switchboards at three other exchanges. Call office facilities were provided at 16 railway stations. The public are permitted to use the police telephone in places where there are no public call office facilities or where the public call offices are restricted.

WIRELESS.

The wireless stations in the Federated Malay States comprise the ship and shore telegraph station at Port Swettenham and the internal communication and flood emergency stations at Kuala Lumpur (Petaling Hill), Kuantan, Kuala Lipis, Temerloh, Kuala Pahang and Sungei Lembing. The station at Mentakab was closed on the 18th of May and the equipment is being transferred to Jerantut.

There are also two small wireless telephone stations at Port Swettenham and Pulau Ketam which provide a wireless telephone service for the police.

The flood emergency stations were used during the period from the 11th to the 18th of January, and again from 17th to the 31st of December when the flood in Pahang rendered other communication impossible. The station at Sungei Lembing was, however, overwhelmed by the December flood; but the instruments were recovered and repaired, and the station has been re-established.

Broadcasting.—Three transmissions a week averaging two hours each transmission were made on behalf of "The Kuala Lumpur Amateur Radio Society". Until 6th May the transmissions which were carried out from the Petaling Hill Station, Kuala Lumpur, were on 325 metres. From that date for about a month, simultaneous transmissions on long and short waves were given and various wavelengths were tried on the short wave band until it was found that 75 metres was the most satisfactory wavelength for the whole country. This wavelength was adopted on the 10th of November.

Research.—A considerable amount of experimental work was carried out using the new Marconi S 3 A transmitter on telephony, both day and night, on various wavelengths. Experimental work on 5-metre telephony was also commenced with promising results. Telegraphy tests were carried out successfully with Java, Manila and Saigon.

RAILWAYS.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying the railway and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the West Coast and the East Coast Lines.

The West Coast line runs north-north-west through Negri Sembilan, Malacca, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on the first July, 1918, the distance between Singapore and Bangkok being 1,194 miles.

The East Coast Line, the last link of which was completed during the year 1931, proceeds northwards from Gemas through Negri Sembilan, Pahang and Kelantan terminating at the port of Tumpat. The length of the line is 327¾ miles and provides an alternative route to Siam from Singapore. A branch line, 13 miles long, has been made from Pasir Mas in Kelantan to the Golok River at the Siamese Boundary, where it joins the Siamese line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on 1st November, 1921.

Branch lines connect the main line with ports on the West Coast at Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld.

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak; Kuang-Batang Berjuntai, 14 miles, Kuala Lumpur-Batu Caves, 8 miles, Sungei Besi-Sultan Street, 8 miles, Sultan Street-Ampang, 6 miles, Connaught Bridge Junction-Kuala Selangor, 30 miles, all in Selangor. The Bahau-Kuala Pilah branch in Negri Sembilan was closed for traffic and the track removed during the year under review.

The branch lines from Seremban to Port Dickson and from Kuala Kubu Road to Kuala Kubu were closed for passenger traffic during the year 1930, as the revenue obtained did not justify the retention of the passenger services. The Connaught Bridge Junction to Kuala Selangor Branch was closed to traffic in the latter part of the year 1931 for similar reasons.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,073 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are provided with restaurant cars and sleeping saloons.

There are 232 permanent stations and 53 flag stations.

Financial.

The expenditure on capital account (including lines not yet open for traffic) was $232,596,218 up to 31st December, 1931, of which $183,810,727 was met from revenue advances and $48,785,491 from Loan Funds.

The receipts in 1931 from all sources were $12,912,579, a decrease of 33 per cent. compared with 1930. Expenditure chargeable to revenue (excluding Renewals Fund Contribution) amounted to $13,231,663, a decrease of 13.66 per cent. The receipts from all sources were $319,084 less than the total expenditure on all services and no contribution has therefore been made to the Railway Renewals Fund.

Capital expenditure.

During the year the net expenditure on Capital Account was $1,968,776 as compared with $7,133,374 in 1930.

Renewals Fund.

The expenditure met from the Railway Renewals Fund during the year amounted to $1,940,420 compared with $4,904,391 in 1930. The balance standing to the credit of the Fund at 31st December, 1931, was $8,071,832, the corresponding figure at 31st December, 1930, being $10,012,251.

Passenger train traffic.

The receipts from passenger train traffic amounted to $4,983,086 compared with $7,977,885 in 1930, a decrease of $2,994,799 (37.54 per cent.).

The receipts from goods train traffic amounted to $5,854,955 compared with $8,790,022 in 1930, a decrease of $2,935,067 (33.39 per cent.).

Goods train traffic.

The introduction of road motor collection and delivery services has been extended during the year. The receipts from this source and road motor passenger services amounted to $48,937. Rail-head motor services form valuable feeders to the railway and offer the additional advantage of door-to-door service.

Road motor transport services.

Miscellaneous services produced receipts to the amount of $2,025,601 during the year 1931 compared with $2,504,996 in the previous year—a decrease of $479,395 (19.14 per cent.).

Miscellaneous services (docks, ferries, rents, etc.).

The revenue returns for the year reflect the continued severe slump conditions and intense competition.

The system of train control introduced in January, 1922, has proved very satisfactory in controlling the movement of rolling stock, checking unnecessary haulage, light loading of wagons, reducing light engine mileage and arranging relief for trainmen and in cases of accidents or breaches of the line, expeditiously restoring communication. The system now controls the main line between Prai and Singapore (490 miles) and there is now direct super-imposed telephone communication on the East Coast Line from Gemas to Kuala Krau and Kuala Lipis.

Train control.

The year under review marked the completion of the East Coast Railway, a work of considerable magnitude and importance. The last link to be completed was 46½ miles and traversed country of a very difficult nature involving heavy earthworks, numerous tunnels, viaducts and major bridges. The work was brought to a successful conclusion on 5th September, when the line was formally opened for through traffic by His Excellency the High Commissioner and His Highness the Sultan of Kelantan, in the presence of a large gathering of both officials and members of the public.

Construction.

The preliminary survey for a line connecting Kuala Lumpur with the East Coast line was completed and the report and preliminary estimate was considered by the Malayan Communications Board. An investigation of the possibility of a railway to Cameron Highlands was commenced but was later abandoned as instructions were issued that no further railway surveys were to be undertaken for the present.

Excellent progress was made on all works connected with the deviation of the railway between Bukit Timah and Tanjong Pagar. All bridges, road diversions, engine, carriage and goods sheds were completed and the permanent way laid throughout the deviation. The new terminal station and the staff quarters were practically completed at the close of the year 1931.

Railway Board.

The Railway Board, composed of three official and six unofficial members, held eight meetings during the year.

ROADS.

The total mileage of roads on 31st December, 1931, was 2,816 miles 78 chains, of which 1,775 miles are bituminously treated.

The average cost of upkeep per mile was $1,070 as compared with $1,241 for the previous year.

The road system consists of two trunk roads, one on the west side and one on the east side of the main range with feeder roads branching off from them. The trunk road on the west side runs from Tampin in the south to Parit Buntar on the borders of Province Wellesley. It passes through Seremban, Kuala Lumpur, Kampar, Ipoh, Kuala Kangsar and Taiping. Its chief feeder roads are: Seremban to Port Dickson, Kuala Lumpur to Klang, Batu Village to Kuala Selangor, Bidor to Telok Anson and Bagan Datoh, Ipoh to Sitiawan, Kuala Kangsar to Grik and Taiping to Sitiawan.

The eastern road runs from Tampin to Kuala Lipis through Kuala Pilah, Karak, Bentong, Raub and Benta. At Karak there is a branch road to Temerloh and at Benta one to Kuantan, a distance of 149 miles. The road from Kuantan to Pekan has recently been completed.

The two main roads are connected by four transverse roads, of which the Kuala Lumpur-Bentong and Kuala Kubu-Raub are the most important. The former rises to 2,000 and the latter to 2,725 feet above sea level.

Transportation on the roads is mainly by motor traction. The number of bullock-carts has decreased considerably during the last few years.

In 1931, 12,765 motor-cars, 3,194 motor-cycles, 959 buses and 3,340 lorries were registered.

SHIPPING.

The only port in the Federated Malay States for ocean-going vessels, Port Swettenham, is situated about 30 miles from Kuala Lumpur.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during the year were 2,772 vessels and 6,228,484 tons as compared with 3,046 vessels and 6,627,498 tons in 1930, a decrease of 399,014 tons.

The number and tonnage of ocean-going steamers entered and cleared were 1.406 of 5,555.534 tons as compared with 1,484 of 5,902,056 tons in 1930, a decrease of 346,522 tons.

The number of ocean-going steamers which came alongside the wharf was 259 as against 333 in 1930. The largest vessel entering the port was the s.s. "Achilles" (British) of 11,426 tons: it was also the deepest draft vessel entering the port, drawing 31′ 4″ of water.

The following table shows the nationality, number and tonnage of merchant vessels entered and cleared at Port Swettenham during 1931:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American ...	13	46,807	13	46,807	26	93,614
British ...	494	2,128,396	494	2,128,396	988	4,256,792
Danish ...	17	55,562	17	55,562	34	111,124
Dutch ...	48	156.724	48	156,724	96	313,448
German ...	42	184,332	42	184,332	84	368,664
Italian ...	10	39,363	10	39,363	20	78,726
Japanese ...	29	118,058	29	118.058	58	236,116
Norwegian ...	50	48,525	50	48.525	100	97,050
	703	2,777.767	703	2,777,767	1,406	5,555.534

The Straits Steamship Company maintains regular services at all the ports in the Federated Malay States, linking them up with each other and with Singapore, Malacca and Penang.

The P. & O. Company also maintains some services on the West Coast.

The principal ports are, Teluk Anson, Port Weld, Kuala Kurau and Sitiawan in Perak; Port Swettenham, and Kuala Selangor in Selangor; Port Dickson in Negri Sembilan; and Pekan and Kuantan in Pahang. The amount of tonnage entered and cleared at ports other than Port Swettenham was about 1,260,000 tons.

The only navigable rivers of any importance in the country are the Perak and the Pahang, and even these are used only by launches and small native craft.

CHAPTER XI.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—7 branches.
Hongkong and Shanghai Banking Corporation—2 branches.
The Mercantile Bank of India Limited—4 branches.

There are no Agricultural or Co-operative Banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under Enactment 16 of 1921 the standard weights and measures are:

(i) The Imperial Standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns	=1 chi
10 chi	=1 tahil (1⅓ oz.)
16 tahils	=1 kati
100 katies	=1 picul (133⅓ lbs.)
40 piculs	=1 koyan

CHAPTER XII.

Public Works.

The department was under the administrative control of the Director of Public Works, represented in each State by the State Engineer and assisted by the Chief Hydraulic Engineer and the Anti-Malaria Engineer in the technical matters relating to these branches of engineering.

The expenditure of the department was $13,015,180 against an authorised provision of $16,928,285, the unexpended balance of $3,913,105 being accounted for as follows:

Personal Emoluments		$ 185,480
Annually Recurrent		333,994
Other Charges and Special Expenditure ...		248,961
Special Services:		
Revenue ...	$1,161,725	3,144,670
Loan ...	1,982,945	

The value of work carried out for other departments and private individuals amounted to $743,926 which, added to the above figure of $13,015,180, gives a total expenditure for the year of $13,759,106.

The percentage of cost of establishment to total expenditure was:

	Per cent.
Civil Engineers and Architects	5.9
Technical Subordinates	3.3
Overseers under Schemes	1.5
Overseers and Sub-overseers on Open Vote ...	.7
Store and Depôt Keepers	.5
Clerical (excluding Financial)	1.8
Financial Staff	.8

The revenue earned during the year amounted to $1,115,838.

The number of separate items for which provision was made under Special Services Revenue was 655, and under Loan 49; 507 items (77.4 per cent.) under Revenue and 19 items (38.77 per cent.) under Loan were completed.

The total expenditure of $13,015,180 was made up as under:

Annually Recurrent		$7,381,435
Other Charges and Special Expenditure ...		117,154
Special Services:		
Revenue	$4,129,939	5,516,591
Loan	1,386,652	

The corresponding figures for 1930 were:

Annually Recurrent	$8,691,863
Other Charges and Special Expenditure...	224,170
Special Services	9,668,904

being a decrease of $5,569,757 in 1931.

The comparative percentages of expenditure to authorised provision in 1931, 1930 and 1929 under these headings were as follows:

	1931. Per cent.	1930. Per cent.	1929. Per cent.
Annually Recurrent	90.77 ...	93.92 ...	91.66
Other Charges and Special Expenditure	86.51 ...	67.66 ...	81.01
Special Services	63.69 ...	89.26 ...	84.08

All public services such as roads, waterworks and Government offices were maintained at a high standard.

Building and construction prices had a pronounced downward tendency as in 1930.

Among the buildings completed or put in hand during the year the following are of special interest:

(i) New English school, Ipoh;

(ii) New market, Ipoh;

(iii) New Astana Negara, Kuala Kangsar;

(iv) New mosque, Klang;

(v) New mosque, Pekan;

(vi) Two-storied ward and operation theatre, Kuala Lipis Hospital;

(vii) Astana for His Highness the Sultan of Pahang at Kuala Lumpur;

(viii) New ward, Kuantan Hospital.

The new Astana Negara, Kuala Kangsar, which is to be the official residence of His Highness the Sultan of Perak is a building of modern construction and internal arrangement, though its external appearance is in keeping with its surroundings; good progress was made during the year and it is anticipated that the work will be completed during the latter half of 1932.

The work of preparing a landing ground for aeroplanes at Port Swettenham was completed during the year, at a cost of $129,935.

In connexion with the proposals to deviate the Klang river, work was begun in May on the construction of a reinforced concrete two-hinged arch bridge at Kampong Attap, Kuala Lumpur; this bridge will have a clear span of 153 feet 6 inches and is estimated to cost $109,800.

Work was carried out continuously throughout the year on the new bridge at Enggor; this bridge consists of seven spans and will have a length of 954 feet when completed.

The preparation in Taiping of a landing ground for aeroplanes was completed during the year. The landing ground is at an average height of 45′ above sea level, and lies, as the crow flies, two miles to the north-west of the Town Hall, Taiping. The area is roughly square in shape, being 880 by 970 yards or 133 acres in extent. On the 6th November, 1931, two R.A.F. aeroplanes landed at this aerodrome: both made splendid landings, and got away without any difficulty.

The work on the Flood Mitigation Scheme at Ipoh was completed, except for some small details, by the end of the year; the scheme stood satisfactorily the somewhat severe test of the December floods. A similar scheme on a smaller scale at Tanjong Malim has also proved successful.

On 18th December a serious flood occurred in the Perak river carrying away the pontoon bridges at both Enggor and Blanja.

In connexion with the new Kinta district water supply, a large amount of detail work was carried out both at the headworks and on the mains. The new 18″ main to Telok Anson was completed and work on the remodelling of the town reticulation was begun.

HYDRAULIC BRANCH, PUBLIC WORKS DEPARTMENT.

During the course of the year the senior staff attached to the Hydraulic Branch was reduced from 14 Engineers, two Dredge Masters and two Assistant Dredge Masters, to nine Engineers, two Dredge Masters and one Assistant Dredge Master.

The maximum, minimum and mean discharges in cubic feet per second per square mile and the total discharge in cubic feet per square mile of catchment area for each month of the year were computed at 28 stations in all (Perak 16, Selangor 10, Negri Sembilan 1, Pahang 1) and some interesting data were obtained, particularly during the December floods in the Perak and Klang rivers.

Five hundred and sixty-one gaugings by current meter observations were made at 48 stations.

Five major and several minor surveys of proposed irrigation and drainage schemes were made during the year.

In Perak, an extension to the scheme for the irrigation of 4,000 acres at Sungei Manik was outlined to include the area between the Batang Padang river and the Sungei Kroh. Investigations for a main drain line were made in the Sitiawan area. In Krian, plans and surveys were completed for the repairs to the reservoir spillway which collapsed during heavy rains in September and a survey made for an increase to the reservoir water supply by a diversion canal from the Ijok river to the Sungei Merah.

In Selangor work proceeded over the Panchang Pedina area. Levels over some 15,000 acres together with measurements of the depth of peat were taken, and a controlled drainage scheme for *padi* cultivation prepared.

In Negri Sembilan and Pahang surveys of potential *padi* areas in the mukims of Durian Tipus (Negri Sembilan) and Pelangai (Pahang) on the borders of Negri Sembilan and Pahang, were made, and an outline scheme for the irrigation of some 3,000 acres was prepared. Several small irrigation schemes were also investigated in Negri Sembilan.

All the main rivers of the Federated Malay States were maintained in good order by snagging, widening, bank-conservancy, and channel control.

Work proceeded on the Ipoh Flood Mitigation Scheme and the new Kinta river channel through Ipoh was completed early in the year, while the Sungei Choh was diverted into the Sungei Pinji as soon as the spillway and bund for the silt retention area were finished. The dipper dredger was working most of the year in the Pinji swamp.

The Klang river deviation work was considerably advanced during the year. The low water channel below Kuala Lumpur was excavated by the dipper dredger, while the cutter suction dredger continued to dredge in the river opposite Kampong Bengali and to pump the silt into the reclamation area.

Investigations in the Muar river were made on behalf of the Electrical Department for the erection of gauging weir and recorder house in connection with a hydro-electric scheme.

The dredger "Kuantan" and attendant craft were hired to the Government of the Straits Settlements for work in Penang harbour from March to August. Thereafter the fleet was laid up at Port Swettenham.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment, 1918, and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;

(*b*) Courts of a Magistrate of the First Class;

(*c*) Courts of a Magistrate of the Second Class;

(*d*) Courts of a Kathi and Courts of an Assistant Kathi;

(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record. The establishment consists of a Chief Justice and three Judges, but the Judges of the Supreme Court of the Colony and of the State of Johore are ex officio Judges of the Supreme Court of the Federated Malay States and vice versa. The qualification required of a Judge is that he should have five years' seniority as a barrister or a member of the Faculty of Advocates in Scotland or ten years as an advocate and solicitor of the local bar.

Magistrates are appointed by the Resident by name or office. Appointments have always been made from the Malayan Civil Service, and all District Officers and most Assistant District Officers are Magistrates of the First Class ex officio. The powers of Magistrates are defined by the Courts Enactment and the Procedure Codes. All members of the Civil Service are required to pass an examination in law before receiving any substantive appointment.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a Penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a Penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment, 1928, for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code, 1923, in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

The total approved strength of the Police Force is 4,349 comprised as follows:

115 British Officers;
49 Malay and other Asiatic Officers;
2,230 Malay Rank and File;
1,715 Indian Rank and File; and
240 Detectives of many nationalities;

in addition there is a Veterinary Police Force of 68 Malays and Indians which, for disciplinary purposes and reasons of economy, is housed in Police barracks and is paid from Police votes, though under the direction of the officers of the Veterinary Department.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang the police contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner, who, subject to the general direction of the Commissioner of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his contingent. A fifth contingent exists in the depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner, who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is, also in Kuala Lumpur, the Headquarters staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch which co-ordinates the criminal and political intelligence of the Federated Malay States, and the Criminal Registry or finger-print bureau, which serves not only the Federated Malay States, but the Straits Settlements and Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hongkong, Dutch East Indies, Siam and Indo-China.

The Federated Malay States Police furnishes British Officers for the Unfederated Malay States and for the Federated Malay States Railway Police.

The Force was up to strength throughout the year; recruiting among Malays was unusually satisfactory; the standard of education among both Malay and Indian constables is improving annually.

In furtherance of the policy of substituting for the British Inspectorate a Malay and Asiatic Inspectorate, greater responsibilities were successfully entrusted to officers of the latter grade with very encouraging results.

The year 1931 was marked by ever increasing depression; by the end of April the price of rubber had dropped to 11.5 cents a kati, and tin to little more than $54 a pikul causing widespread unemployment which was accentuated as soon as the restriction of tin was imposed in August.

Mass repatriation of both Chinese and Indians and the effect of the Straits Settlements Immigration Restriction Enactment eased the position from the police point of view. All nationalities showed praiseworthy fortitude under hardship and the only two instances of looting of foodshops which occurred were promptly repressed.

The number of offences reported during 1931 totalled 86,236 compared with 88,015 in 1930, seizable offences increased from 9,052 to 10,584 and non-seizable offences decreased by 3,311 and totalled 75,652.

At the close of the year convictions had been obtained in 4,899 of the seizable reports.

The total number of murders, gang-robberies and robberies was 352 compared with 358 in 1930 and an average of 237; of the murders, ten were committed in the course of robbery or gang-robbery.

Perhaps the most disturbing feature of the year was the number of abductions, totalling 11, all of which occurred in Perak. All the persons abducted had returned except one by the end of the year; these cases are noteworthy for the absence of any assistance being afforded the police by the victims, and their invariable denial of payment of the ransom which obtained their release from confinement in the caves or jungle fastnesses of Kinta.

At the close of the year there remained no organised gang of robbers in operation; in Perak the formidable band under Lee Fong had been rounded up with all its armoury, whilst in Selangor the Detective Branch had arrested, with their weapons, a dangerous band of Cantonese gunmen, members of the Heng Hup Society.

Generally speaking, there was little activity on the part of Secret Societies of the old-fashioned Triad type, though very valuable arrests were made in Kuala Kangsar and Kuala Selangor of members of Sino-Malayan Societies.

The number of unlicensed firearms recovered by the police during the year was 91, compared with 43 in 1930, and an average of 51. Of these, 11 were identified as having been previously stolen, whilst of the balance, 33 were home-made guns carried by robbers and kidnappers.

The number of thefts and house-breakings reported showed a further increase and must be considered the inevitable outcome of unsatisfactory economic conditions, conditions which were also especially favourable to the machinations of the subversive elements of the population. The work of checking the repeated attempts of politically inclined persons to take advantage of economic distress to nurture discontent has involved unremitting vigilance.

In September, 1931, the Police Department assumed responsibility for the suppression of brothels.

Traffic was controlled in Perak, Selangor and Negri Sembilan by special traffic branches which exhibited increased efficiency. The power granted to officers to compound offences was freely exercised.

The heavy figures of seizable crime were reflected in the volume of work dealt with in the Criminal Registry.

The number of finger-print inquiry slips searched for during the year totalled 30,648 compared with 26,299.

There are now 252,875 records registered and filed in the bureau.

PRISONS.

There are six prisons in the Federated Malay States located as follows:

- Taiping;
- Batu Gajah;
- Kuala Lumpur;
- Seremban;
- Kuala Lipis;
- Kuantan.

The prison at Taiping is primarily a convict prison; the other prisons are local.

In addition to the prisons, there are lock-up cells at certain police stations where prisoners are detained for short periods.

Vagrants are confined in special Vagrant Wards.

The total daily average population of all the prisons in 1931 was 1,656. At the beginning of the year, it was 1,384; 11,905 persons were admitted during the year, 11,406 were discharged, one escaped, nine died and ten were executed. There was thus a total of 1,863 on 31st December, 1931.

The health of the prisoners was uniformly good.

There is no special institution for the accommodation of juveniles in the Federated Malay States.

Juvenile offenders may be sent to the Reformatory at Singapore; this institution is under the administration of the Education Department. There is no probation system.

Time is not allowed for the payment of fines but this question is now under consideration.

The Reformatory, Singapore, is the only institution used for the incarceration of juvenile offenders from the Federated Malay States. It is under the control of the Director of Education and it is not in any way connected with the prisons administration. It admits juvenile offenders and destitute male children between the ages of 7 and 16. No boy is detained in it beyond the age of 18.

Of the 68 boys admitted during the year. 18 were from the Federated Malay States.

Boys released from the Reformatory who had no parents or relatives or friends were either found work or were adopted by respectable people recommended by the Chinese Protectorate.

Electricity was installed throughout the Reformatory and quarters during the course of the year.

CHAPTER XIV.

Legislation.

Forty Enactments were passed during the year 1931. Of these two were Supply Enactments and twenty-nine were purely amending Enactments.

The list of Enactments which were not purely amending Enactments is as follows:

(1) The Women and Girls' Protection Enactment (No. 1), which replaces Enactment 2 of 1914 and provides for the suppression of brothels—Cf. S.S. Ordinance 15 of 1930.

(2) The Opium and Chandu Enactment (No. 5), which replaces Enactment 15 of 1925, provisions relating to licences being omitted as all chandu is now sold directly by Government.

(3) The Registration of Dentists Enactment (No. 6), which provides for the establishment of a Dental Board and prohibits practice by unregistered dentists.

(4) The Small Holdings (Restriction of Sale) Enactment (No. 8), which provides that no order of sale of any country land not exceeding 25 acres in area, whether made in execution of a decree or on application for foreclosure of a charge, shall be carried out without the consent of the Ruler in Council. This Enactment is intended as a temporary measure and lapses at the end of a year unless extended by the Chief Secretary to Government.

(5) The Loan Enactment (No. 11), which authorises the flotation of a local loan.

(6) The Government Loans Security Enactment (No. 12), which replaces Enactment 5 of 1910 and authorises the charging of land to District Officers as such and the registration of such charges.

(7) The Tin and Tin-ore (Restriction) Enactment (No. 23), which authorises the Chief Secretary to Government to make rules regulating and restricting the production, export, sale, purchase or possession of tin or tin-ore.

(8) The Quarantine Enactment (No. 29), which embodies the law as to quarantine proper in a separate Enactment.

(9) The Electricity Enactment (No. 34), which replaces Enactment 14 of 1925.

The list of amending Enactments is as follows:

(1) The Pensions (Amendment) Enactment (No. 2), which increases the maximum limit of pension from £1,300 to £2,000.

(2) The Sanitary Boards (Amendment) Enactment (No. 3), which regulates the assessment and rating of buildings on mining land within Sanitary Board limits.

(3) The Immigration Restriction (Amendment) Enactment (No. 4), which extends the provisions of the principal Enactment to immigration by land.

(4) The River Launches (Amendment) Enactment (No. 7), which provides for a register to be kept of licensed launches and for survey before a licence is issued.

(5) The Wild Animals and Birds Protection (Amendment) Enactment (No. 9), which amends the conditions relating to the right of defence of person or property against the depredations of wild animals, and prohibits killing wild animals at a salt lick or by the aid of artificial light.

(6) The Health Boards (Amendment) Enactment (No. 10), which removes the obligation to notify the amount of the cess for any year not later than October in the year preceding.

(7) The Land Acquisition (Amendment) Enactment (No. 13), which enables the Collector to require security for the costs of an appeal.

(8) The Vagrants and Decrepit Persons (Amendment) Enactment (No. 14), which extends the statutory powers of a Protector of Chinese to an Assistant Protector.

(9) The Weights and Measures (Amendment) Enactment (No. 15), which introduces a standard for troy and apothecaries weights for the purposes of section 9 of the principal Enactment and makes provision for "remedies".

(10) The Customs (Amendment) Enactment (No. 16), which embodies a number of amendments found to be necessary.

(11) The Mining (Amendment) Enactment (No. 17), which prohibits the prospecting of land in a Malay Reservation.

(12) The Pensions (Amendment No. 2) Enactment (No. 18), which was repealed by Enactment 38 of 1931 and was never brought into force.

(13) The Registration of Schools (Amendment) Enactment (No. 19), which increases the grounds on which the books and documents of a school may be removed for examination.

(14) The Quarantine and Prevention of Disease (Amendment) Enactment (No. 20), which prohibits the importation or possession of the virus of yellow fever.

(15) The Arms (Amendment) Enactment (No. 21), which makes certain alterations in the provisions of the principal Enactment regarding licences.

(16) The Malayan Planters' Provident Fund (Amendment) Enactment (No. 22), which authorises voting by proxy and alteration of rules with retrospective effect.

(17) The Courts (Amendment) Enactment (No. 24), which amends the conditions as to appeal to the Court of Appeal in criminal cases.

(18) The Stamp (Amendment) Enactment (No. 25), which introduces a tax on bets and sweepstakes held by any recognised racing club or association.

(19) The Sale of Food and Drugs (Amendment) Enactment (No. 26), which adds to the objects for which rules may be made.

(20) The Railways (Amendment) Enactment (No. 27), which authorises special rates for goods traffic.

(21) The Land Code (Amendment) Enactment (No. 28), which introduces a number of amendments considered to be necessary. The most important of these is the imposition of an applied condition that certain lands shall only be cultivated with rice.

(22) The Public Officers' Guarantee Fund (Amendment) Enactment (No. 30), which authorises a contribution by Government where unusually heavy security is necessary.

(23) The British and Foreign Companies (Amendment) Enactment (No. 31), which requires banking companies to obtain a licence before commencing business.

(24) The Minor Offences (Amendment) Enactment (No. 33), which was passed to make soliciting in public a punishable offence.

(25) The Estate Duty (Amendment) Enactment (No. 35), which imposes a heavier rate of duty on the estates of persons dying after 1931.

(26) The Rubber Research Institute of Malaya (Amendment) Enactment (No. 36), which gives the right to nominate members to a new body which represents two of the former nominators.

(27) The Societies (Amendment) Enactment (No. 37), which defines the position of societies formed outside the Federated Malay States.

(28) The Pensions (Amendment No. 3) Enactment (No. 38), which repeals the former provision for reduction of pension during re-employment in Government service.

(29) The Stamp (Amendment No. 2) Enactment (No. 39), which increases the duty imposed by Enactment 18 of 1931.

The principal subsidiary legislation passed during the year is as follows:

Bureau of Statistics Enactment, 1919—

Gazette Notification No. 5631 of 14th August, 1931.

Rules made by the Chief Secretary to Government requiring all estates to furnish monthly returns of stocks of rice held, the area under food-stuffs and the estate population.

Deleterious Drugs Enactment, 1928—

Gazette Notification No. 4538 of 3rd July, 1931.

Certain drugs, including preparations of diamorphine, exempted from the provisions of the Enactment.

Gazette Notification No. 7581 of 6th November, 1931.

Di-hydro-morphine and all esters of morphine added to the schedule of deleterious drugs.

Excise Enactment, 1923—

Gazette Notifications Nos. 5643 of 14th August, 1931, and 8828 of 31st December, 1931.

Rules specifying respectively the purposes to which the profits of an estate toddy-shop may be applied and the hours during which licensed retail toddy-shops may be kept open.

Land Code, 1926—

Gazette Notification No. 3992 of 5th June, 1931.

Rule authorising reduction of the fee for a temporary occupation licence where the occupation is for the cultivation of rice or food-stuffs.

Passport Enactment, 1920—

Gazette Notification No. 536 of 16th January, 1931.

General rules to regulate applications for and issue of passports, consolidating and re-enacting the former rules.

Pensions Enactment, 1928—

Gazette Notification No. 2212 of 13th March, 1931.

Proviso allowing an officer who has received promotion shortly before retiring to calculate his pension as if he had not been promoted if this is to his advantage.

Quarantine Enactment, 1931—

Gazette Notification No. 6551 of 11th September, 1931.

General regulations for the treatment of infected, suspected and healthy ships, for surveillance or observation at a quarantine station of passengers, and for disinfection, disinsectisation and deratisation. These regulations follow as far as possible the terms of the Paris International Sanitary Convention, 1926.

Registration of Schools Enactment, 1927—

Gazette Notification No. 7137 of 9th October, 1931.

Rule authorising a refusal to register any person as a teacher in a private English school if he has not passed the Cambridge Junior Local.

Rule Committee (Supreme Court) Enactment, 1930—

Gazette Notification No. 3175 of 24th April, 1931.

Rule prescribing procedure for appeal to Judge from order or decision of Registrar.

Sale of Food and Drugs Enactment, 1913—

Gazette Notification No. 6559 of 11th September, 1931.

Rule prohibiting sale or importation of cosmetics containing lead.

Tin and Tin-ore (Restriction) Enactment, 1931—

Gazette Notification No. 8830 of 31st December, 1931.

Rules consolidating and re-enacting rules passed at various earlier dates for regulating and restricting the production, export, sale, purchase or possession of tin and tin-ore.

Vaccination Enactment, 1930—

Gazette Notification No. 1544 of 13th February, 1931.

Rules for vaccinations by public vaccinators.

Volunteer Enactment, 1924—

Gazette Notification No. 3484 of 8th May, 1931.

Reconstitution of the various corps and units of the Volunteer Forces, and of their establishment and personnel.

Wild Animals and Birds Protection Enactment, 1925—

Gazette Notification No. 3235 of 5th May, 1931.

Elephant restored to the schedule of big game.

As regards factory legislation the relevant provisions of law are as follows:

(1) The Machinery Enactment, 1927, providing for the inspection of boilers and machinery and the regulation of their control and working.

(2) The Labour Code, 1923, containing various provisions for the amelioration of the conditions of labour, including provisions similar to those of the Truck Acts in England and provisions for securing the health of the labourers and for the establishment of hospitals and the treatment of sick labourers upon estates and mines.

(3) The Dangerous Trades Enactments, 1909, authorising the making of rules for the control and regulation of any dangerous trade. Rules have been made with regard to cyaniding and the calcining of sulphurous or arsenical ores.

(4) The Excise Enactment, 1923, authorising the making of rules to regulate the erection, inspection, supervision, management and control of distilleries or factories where dutiable articles are manufactured. Rules have been made for the construction and conduct of distilleries and match factories.

With reference to compensation for accidents the Executors (Powers) and Fatal Accidents Enactment, 1929, makes provision for compensation similar to those contained in Lord Campbell's Act, 1846. A Workmen's Compensation Enactment was passed in 1929, following the model of the Indian Workmen's Compensation Act, but has not been brought into force pending the passing of similar legislation in the Colony.

Except for the provisions of the Labour Code already mentioned there is no legislative provision for sickness and none for old age.

CHAPTER XV.

Public Finance and Taxation.

Budget for 1931.

The Estimates of Revenue and Expenditure for the year 1931 provided for a revenue of $71,349,001 (excluding Railway revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway expenditure on Revenue Account) of $70,940,037. Figures for the annual revenue and expenditure since 1889 are given in Appendix A.

Actual revenue and expenditure.

The actual revenue for the year was $52,348,659 and the expenditure $62,163,328. Thus there was a deficit of $9,814,669 instead of an estimated surplus of $408,964.

The shortages in revenue as compared with the estimate were:

Customs	$ 8,923,483
Excise	5,778,931
Forests	575,686
Lands and Mines	350,653
Licences and Internal Revenue	303,866
Municipal	407,813
Light, Water, Power, etc.	309,964
Posts, Telegraphs and Telephones	676,653
Railways (Net Receipts)	1,599,371
Timber, etc.	352,643
Rent, etc.	201
Miscellaneous	56,895
Land Sales	569,349
Total	$19,905,508

The shortages in Customs and Excise revenue are accounted for as follows:

Customs—

Tin	$3,065,899
Rubber	617,589
Tobacco	2,236,454
Spirits	903,721
Petroleum	1,469,535
Other Items	630,285
	$8,923,483

Excise—

Chandu	$4,907,215
Other Items	871,716
	$5,778,931

In the case of the Railways, the estimated net revenue over expenditure of $1,599,371 was not realised and a net expenditure over revenue of $319,084 had to be met from the general revenues.

The following items failed to yield the estimated amounts by the percentages noted against each:

	Per cent.
Land Sales	57
Timber, etc.	50
Forests	41
Posts, Telegraphs and Telephones	20
Municipal	12
Lands and Mines	8
Licences	8
Light, etc.	8

The excesses in revenue as compared with the estimate amounted to $905,166 as under:

Fees of Court, etc.	$247,606
Interest	641,486
Sale of Property	15,731
Grant from Colonial Development Fund	343
	$905,166

The total savings in expenditure amounted to $11,476,680, the largest items being:

Public Works—Annually Recurrent	$ 1,600,892
Public Works—Special Services	1,099,801
Charges on account of Public Debt	1,089,983
Medical	889,323
Municipal	851,455
Posts and Telegraphs	741,109
Forests	689,632
Trade and Customs	596,309
Public Works Department	580,060
Surveys	496,748
Education	465,659
Electrical	367,277
Military	244.914
Purchase of Land	226,134
Pensions, etc.	221,040
Civil Service	200,675
Agricultural	174,094
District Offices, etc.	159,060
Miscellaneous Services—Unreserved	152,952
Clerical Service	97,925
Police	97,390
Printing	89,079
Mines	47,834
Malay Officers	41,084
Co-operative Societies	36,704
Prisons	32,209
Marine	30,716
Town Planning	23,616
Veterinary	22,133
The Residents	20,392
Government Gardens and Plantations	20.172
Chinese Secretariat	18,600
The Rulers and Native Officers	13,632
	$11,438,603

Excesses over estimated expenditure totalled $2,699,971 as follows:

Miscellaneous Services—Reserved Services ...	$1,455,172
Labour	775,762
Railways—Net Expenditure over Revenue ...	319,084
Exchange	60,469
Transport	59,661
Courts	21,586
The High Commissioner	5,521
Public Trustee	1,761
Colonial Development Fund Expenditure ...	343
Audit	312
Bands	300
	$2,699,971

(*a*) The excess under Miscellaneous Services is caused by the following special expenditure which was not provided for in the Estimates:

Depreciation in the value of investments, written off	$1,605,820
Repatriation of unemployed Chinese ...	266,218
,, ,, Decrepit Chinese ...	242,577

(*b*) That under Labour Department is caused by the special expenditure of $807,385 for the Federated Malay States share of the cost of repatriation of Indian labourers.

(*c*) The excess under exchange was due to the adverse rate of exchange that prevailed throughout the year and the provision made in this case as well as in the case of transport, proved insufficient.

(*d*) The excess under Courts was due to the engagement of additional Judges to cope with the increased volume of work.

Public debt.

The total amount of the public debt on 31st December, 1931, was $96,185,714, being:

Straits Settlements Sterling Loan	$80,185,714
Federated Malay States Local Loan ...	16,000,000

The Straits Settlements Loan remained as on 31st December, 1930, at $80,185,714 (£9,355,000). The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent. and the second instalment (£4,200,000) in May, 1922, at 95, with interest at 4½ per cent. The Sinking Funds, contributions to which started in 1925, amounted to $14,252,061.

The Federated Malay States Local Loan of $16,000,000 was issued in May, 1931, at 98, bearing interest at 4½ per cent. Contributions to a Sinking Fund for the redemption of this loan will have to be provided out of revenues after the 1st January, 1934.

The following statement shows the assets and liabilities on the 31st December, 1931:

Assets and liabilities.

Liabilities.		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		721,974	71
Capital Account 4½ per cent. (Federated Malay States Local Loan, 1959), Balance at credit thereof (*d*)		11,030,554	61
Sundry Outstanding Accounts		89,496	51
Due to India (Agency Account)		94,014	59
,, ,, (Current Account)		44,511	38
Due to Ceylon (Agency A/c) ...		73,562	90
Due to Crown Agents		21,690	61
Due to I.I. Fund		186,874	86
S.S. Government War Service Land Grant Scheme		8,435	03
Family Remittances		1,562	83
Deposits—			
Courts	$166,641.25		
Forests	233,835.56		
Lands	192,923.50		
Postal	148,305.03		
Postal A/c Stores—Colony	300,000.00		
Planters' Loans Board	600,000.00		
Miscellaneous ...	703,959.32		
		2,345,664	66
Selangor River Protection Reserve Account		75,946	74
Sundry Funds—			
Police Fine and Reward Fund ...	$ 41,378.10		
Public Officers' Guarantee Fund	309,062.34		
Composition Stamp Duty Fund	318,912.76		
Malayan Flood Relief Fund ...	57,229.35		
R.E.R. and P. Reserve Fund	2,495,866.53		
Phillips' Agricultural School Scholarship Fund	4,488.91		
Government Motor Vehicles Insurance Fund	38,6 . 2		
Miscellaneous ...	54,083.85		
		3,319,716	96
War Savings Certificates, 1924-1927		280	00
Opium Revenue Replacement Reserve Fund		22,873,607	53
Inter-Treasury Accounts ...		37	61
Suspense		54,612	12
Capital Fund—Bagan Serai Rice Mill		382,129	73
Capital Fund—Kuala Kurau Rice Mill		250,000	00
Capital Fund—F. M. S. Government Factory		400,000	00
Surplus—			
Reserve for Public Works—Special Services	$1,441,816.00		
Reserve for Supplementary Sinking Fund, S.S. Sterling Loan ..	20,590,000.00		
	22,031,816.00		
Balance unallocated	28,762,766.45		
		50,794,582	45
		92,769,255	83

Assets.		$	c.
Cash in Treasuries as per distribution statement		2,857,319	83
Cash with Agencies—			
Malayan Information Agency	$ 23,747.04		
Penang	41,771.57		
Singapore	169,701.61		
		235,220	22
Cash in Transit		320,794	81
Joint Colonial Fund (Crown Agents)		3,488,571	43
Fixed Deposits		500,000	00
Investments (Surplus Funds)—(*c*)			
S.S. Municipal Debentures	$ 1,020.00		
Sterling Securities	15,063,213.35		
Perak River Hydro-Electric Power Co., Ltd.	4,478,571.43		
Nipah Distilleries of Malaya Ltd.	42,857.15		
Sungei Draka Plantations	42,250.00		
		19,627,911	93
Investments—Opium Revenue Replacement Reserve Fund		15,587,893	24
Investments Opium Revenue Replacement Revenue Fund Loan to P.R.H.E.P. Coy. Ltd.		7,285,714	29
Investments (Specific Funds)—			
Police Fine and Reward Fund ...	$ 35,843.04		
Public Officers' Guarantee Fund	360,356.15		
Malayan Flood Relief Fund ...	57,113.00		
Securities Deposit Account ...	6,078.10		
Phillips' Agricultural School Scholarship Fund	4,404.00		
Composition Stamp Duty Fund, 4½ per cent. with Crown Agents	318,912.76		
		722,707	05
Family Remittances		1,647	37
Due by F.M.S. Railways		467,616	17
Due by other Governments—			
Crown Agents	$ 1,429.18		
Johore	34,084.44		
Kedah	4,766.02		
Kelantan	9,374.98		
Perlis	1,040.43		
Singapore	22,647.25		
Trengganu	22,481.41		
		95,823	71
Sundry Outstanding Accounts		22,718	23
Loans—			
Siamese Government (*b*) ...	$31,433,429.09		
Brunei Government	391,000.00		
Kelantan ,, ...	300,000.00		
Planters ,, ...	2,230,295.49		
War Service Land Grant Scheme	1,716,103.76		
Agricultural	32,158.34		
Buildings	356,426.26		
Miscellaneous	1,352,696.16		
		37,812,109	10
Advances		35,546	78
Imprests		106,952	62
Bentong Tailings Retention Scheme		257,950	25
Stores and Materials Account, Post Office ...		1,161,375	53
,, ,, ,, P.W.D.		165,083	82
,, ,, ,, Electrical Dept.		757,852	20
,, ,, ,, Timber Branch ..		3,459	53
,, ,, ,, Marine Slipway...		45,147	09
,, ,, ,, Burma Rifles ...		102,354	99
Marine Slipway Account		6,000	00
Suspense		59,708	57
Bagan Serai Rice Mill		382,129	73
Kuala Kurau Rice Mill		250,000	00
F.M.S. Government Factory		400,000	00
Stocks of Damar and Minor Forest Produce ...		9,647	34
		92,769,255	83

NOTES:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B).

(*b*) Repayment of this loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

(*c*) Investments have been taken at valuation on 31st December, 1931. To this exception has been made in respect of Perak River Hydro-Electric Preference Shares, Nipah Distilleries and Sungei Draka Plantations for which no market quotations are available, and which are stated at cost price.

(*d*) The 4½ per cent. Local Loan, 1959, has been fully subscribed and appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of Revenue.

Railways.

Separation of the Railway accounts from the general accounts was effected as at close of business on 31st December, 1931, the result being to disclose that after meeting the deficit on the year's work the Railway Administration still owed the Treasury the sum of $467,616 and this amount appears on the assets side of the general balance sheet.

Loan to Siam.

The loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $31,433,429 on the 31st December, 1931, having been reduced by the payment of the eighth instalment due on 1st January, 1931. As this loan is being repaid by equal yearly payments to include both principal and interest, the principal part of the instalments will steadily increase.

Loan to Brunei.

The loan to Brunei, which stood at $395,000 on 31st December, 1930, has been reduced to $391,000 by the payment of the annual instalment due in 1931.

Loan to Kelantan.

The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1931.

Loans—Planters and War Service.

The total amount of loans outstanding on 31st December, 1931, was $3,946,400 against $4,085,241 on 31st December, 1930.

Other loans.

Outstandings on 31st December, 1931, amounted to $1,741,280 compared with $2,032,770 on 31st December, 1930.

Surplus.

The surplus on 31st December, 1930, was $60,609,252. As the expenditure for the year exceeded the revenue by $9,814,669, the surplus was reduced to $50,794,583 on 31st December, 1931. In view of the decision to meet payments to the Supplementary Sinking Fund Straits Settlements Sterling Loan out of repayments of the Siamese Loan instead of from current revenue a sum of $20,590,000 out of this surplus must be regarded as earmarked for this purpose in addition to a sum of $1,441,816 earmarked for specific Public Works Special Services. The unallocated balance of the surplus is, therefore, $28,762,767, but only part of this is available in a liquid form.

The liquid assets comprising cash, fixed deposits, Joint Colonial Fund and easily realisable investments (excluding the investments earmarked for certain specific funds) amounted to $22,466,140 at the end of the year as compared with $23,833,415 at the beginning.

Account should be taken of the following changes in the cash position during the year besides the deficit of $9,814,669 for the year:

(*a*) Balance at the beginning of the year included $8,158,535 cash and fixed deposits held by the Railways, the accounts of which have been separated on 31st December, 1931.

(*b*) The sum of $1,885,714 due to the Joint Colonial Fund at the end of 1930 was repaid during the year.

(*c*) The loan of £850,000 ($7,285,714) to the Perak River Hydro-Electric Power Co., Ltd., made in 1930 from Surplus Funds was transferred to the Opium Revenue Replacement Fund in 1931.

(*d*) The net proceeds of the Local Loan after meeting the loan expenses and expenditure on loan works for the year (viz., $11,030,555) forms part of the liquid assets on 31st December, 1931.

The investments that are not easily realisable are those invested in Perak River Hydro-Electric Power Co., Ltd., Nipah Distilleries and Sungei Draka Plantations, amounting in all to $4,563,679.

Singapore Naval Base.

This account was closed in 1931, the contribution of £2,000,000 having been met in full from the earmarked investments.

Railways Renewals Reserve Fund.

This account has also been closed as far as the general Treasury account is concerned, it having been transferred to the Railway on separation of accounts on 31st December, 1931.

Opium Revenue Replacement Reserve Fund.

This fund, which was started with $10 millions provided out of revenue in 1925 and $9,828,503 representing contribution of 15 per cent. of the annual revenue from chandu sales for the years 1926 to 1930 together with the accumulated interest from inception to 31st December, 1930, and which stood at $24,494,172 on 31st December, 1930, has been reduced to $22,873,608 on valuation of securities at current market rates on 31st December, 1931. The fund is invested in sterling securities, with the exception of £850,000, which has been lent to the Perak River Hydro-Electric Power Co., Ltd., as shown on the assets side of the balance sheet.

The interest earned on this fund during 1931 has been credited to revenue and contribution to the fund during the year was suspended.

Rubber Experimental Research and Propaganda Fund.

This fund created by an appropriation from Surplus Funds stood at $2,500,000 on 31st December, 1930, but was reduced to $2,495,867 on 31st December, 1931. The commitments against this balance amounted to $1,763,010 on 31st December, 1931.

Sterling Loan Capital Account.

A statement of the Sterling Loan Capital Account is published as Appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on the Railway and other works up to 31st December, 1931, accounted for $73,575,575, leaving a balance of $721,974 still available to meet capital expenditure during 1932. This balance is in excess of the estimated balance of $477,853, due mainly to under-spending by the Posts and Telegraphs Department.

Local Loan Capital Account.

A statement of the Local Loan Capital Account is published as Appendix C to this report. Of the total proceeds of $15,640,000, expenditure on Railway, Electrical and Public Works accounted for $4,609,445, leaving a balance of $11,030,555 still available to meet capital expenditure in 1932 and subsequent years. This balance is also in excess of the estimated balance of $10,349,330, due to general under-spendings by the three departments concerned and to the postponement or cancellation of certain waterworks services under the Public Works Department.

The following is a summary of the Customs tariff:

IMPORT DUTIES.

Description of article.	Duty.
Ale, beer, stout, porter, cider and perry	$1.20 per gallon
Other intoxicating liquors ...	Graduated from $1.50 to $14 per proof gallon
Kerosene	$ .15 per gallon
Petrol	.35 ,,
Tobacco—	
(*a*) Cigars and snuff	1.60 per pound
(*b*) Cigarettes	1.00 ,,
(*c*) Unmanufactured tobacco	.70 ,,
(*d*) Manufactured tobacco excluding cigars, cigarettes and snuff	
(i) if imported for sale to the public in airtight tins or containers ...	1.10 ,,
(ii) not otherwise provided for	.80 ,,

Description of article.	Duty.
Matches	$ .12 per 1,000 matches
Kachang oil	.03 per pound
Butter, tinned	.12 ,,
,, frozen	.15 ,,
Margarine	.06 ,,
Lard	.04 ,,
Ghee	.12 ,,
Cement	8.00 per ton
Tiles	12.00 ,,
Cosmetic and perfumes	25 per cent. *ad valorem*
Textiles	10 ,, ,,
Cycles and parts, tyres and tubes for cycles	10 ,, ,,
Musical instruments and accessories	10 ,, ,,

EXPORT DUTIES.

Coffee	From 1 per cent. to 2½ per cent. *ad valorem*
Gambier	15 cents per pikul
Gutta-percha	2½ per cent. *ad valorem*
Pepper	30 cents per pikul
Rubber	1 per cent. *ad valorem* when price is under 30 cents per lb to 5 per cent. when price is 80 cents or over. In addition a further duty of 10 cents per pikul for the purposes of the Rubber Research Institute of Malaya
Sugar	1 per cent. *ad valorem*
Sugar-cane	1 cent per pikul
Formosa camphor	10 per cent. *ad valorem*
Gold	2½ ,, ,,
Tin—	
Tin smelted or manufactured from tin-ore and won in the Federated Malay States—	
When the price of tin does not exceed $41 (per pikul)	$10 per bhara.*

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* A bhara=3 pikuls or 400 lbs.

Description of article.	Duty.
Tin—(*cont.*)	
When the price of tin exceeds $41 but does not exceed $42	$10.50 per bhara
When the price of tin exceeds $42 but does not exceed $43	$11 per bhara
and so on, the duty per bhara being increased by 50 cents for every dollar by which the price of tin exceeds $41	
Tin-ore	72 per cent. of the duty on tin, with, in the case of tin-ore exported otherwise than under such guarantees as the Chief Secretary may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul
Scheelite	$2.00 per pikul
Wolfram	$2.00 ,,
All other metals and metalliferous ores	10 per cent. *ad valorem*

In addition to the existing *ad valorem* duty, a further duty of five cents per pikul is imposed on all tin-ore exported. Such further duty will be devoted to defraying the expenses incurred in connection with Tin Restriction.

China-clay or kaolin	2½ per cent. *ad valorem*
Fish	Usually 10 per cent. *ad valorem*
Skins and hides	10 per cent. *ad valorem*

EXCISE DUTIES.

Chinese samsu	$ 9 per proof gallon
Other intoxicating liquors ...	$11 ,, ,,

Description of article.	Duty.
Matches	$ .09 per 1,000 matches where both matches and containers are made from imported timber. $ .08 per 1,000 where the matches only are made from imported timber. $ .06 per 1,000 where both matches and containers are made from local timber.

Stamp Duties.

Stamp duties are collected, by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

Poll Tax and Hut Tax.

There is no poll or hut tax.

CHAPTER XVI.

Miscellaneous.

ELECTRICAL DEPARTMENT.

General.

The aggravation of the adverse trade conditions which had prevailed in 1930 led to further retrenchment of expenditure both on personnel and on annually recurrent services.

The introduction as from the 1st March, 1931, of the Tin Restriction Enactment resulted in a curtailment of output from dredges and mines with a consequent reduction in the consumption of electric power.

Revenue.

This restriction of production, coupled with the strict economy exercised by all other classes of consumers, had a direct adverse effect upon the revenue of the Electrical Department which showed a decrease, as compared with the 1930 figure, of $219,408.

It is satisfactory, however, to be able to report that the working costs of the department over the same period showed an even larger drop of $241,127.

Steady development throughout the country is evidenced by the number of new consumers connected, but this has not been sufficient to counteract the decline in consumption of energy by the mining industry.

Capacity and output.

The total capacity of plant installed for the generation of electricity in the Federated Malay States during 1931 was 116,840 kilowatts, an increase of 151 kilowatts over 1930.

The total number of units generated by the above plant in 1931 was 202,172,218, compared with 219,276,661 in 1930.

Of these units, 24,642,611 were generated by Government undertakings, and the balance of 177,285,041 by private undertakings.

In certain localities the Government purchases power in bulk from private companies and carries out the distribution work itself. The number of units purchased for this purpose during the year was 3,607,914.

The fall in consumption of electricity during 1931 amounted to 7.8 per cent. which is very small considering the very severe trade conditions which existed.

COMPANIES.

During the year 22 local companies with a total nominal capital of $8,748,769 were incorporated and registered as compared with 32 with a nominal capital of $7,013,000 in 1930 and 47 with a total nominal capital of $23,602,658 in 1929.

The largest number of companies registered in any recent year was 56 ($35,764,500) in 1926 and 54 ($38,934,928) in 1920.

The main objects of the new companies were mining (3), planting and mining (2), land development (2), general business (5), car repairing (2), brokering (2). One company for publishing a newspaper was registered. All except two were private companies.

Twenty-four companies were in voluntary and six in compulsory liquidation, nine voluntary liquidations being new. No winding-up orders were made.

There were 671 companies on the register at the end of the year.

Twenty-one companies incorporated outside the Federated Malay States filed particulars under section 2 of Enactment (IX), 1912, as against 37 and 21 in 1930 and 1929, respectively. The objects of these companies were briefly, insurance (3), general merchants (6), mining (1), mining and planting (2), tobacco merchants (2), brewery (1). These companies were incorporated in England (6), Straits Settlements (9), Shanghai (2) and Australia, Holland, Hongkong, New York, one each.

Two were under compulsory liquidation and eight known to be in voluntary liquidation.

At the end of 1931, 1,039 were on the register as compared with 1,019 on 31st December, 1930.

Sixteen Fire Insurance and 24 Life Assurance Companies were registered under their respective Enactments on 31st December, 1931, representing an increase of one in each category during the year.

BANKRUPTCY.

During the year 443 bankruptcy notices and 187 petitions were filed and 96 receiving orders and 90 adjudication orders were made as compared with 327 notices, 147 petitions, 102 receiving orders and 96 adjudication orders in 1930.

Of the persons adjudicated bankrupt, 49 were Chinese, 30 natives of India, four Malays, four Eurasians, two Ceylonese and one European. By occupation 37 were traders, 15 clerks, 12 landowners, five contractors, four miners, four rubber dealers, four married women and nine miscellaneous.

Insolvency certainly increased but actual new legal bankruptcy shewed a slight decrease on the year.

Three compositions were approved by the Court, one in Perak and two in Selangor; eight discharges, seven in Selangor and one in Negri Sembilan, three unconditional and four subject to period of suspension.

There were four criminal proceedings in bankruptcy.

The gross liabilities and assets stated by debtors were $886,783 and $848,986, respectively.

PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the ninth year of the working of the department of the Public Trustee.

During the year the Public Trustee accepted 26 trusts in all as compared with 24 in 1930; 17 trusts were wound up and at the end of the year 93 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at over $4,000,000.

The office of Official Administrator, Federated Malay States, created in 1928, is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1930 was 24 valued at over $464,000; 16 estates were wound up and at the end of the year 35 were still being administered.

CO-OPERATION.

The statistics relate to the co-operative year from 1st July, 1930, to 30th June, 1931.

Staff.

The full senior staff, namely, the Director of Co-operation, the Economic and Education Officer and the Assistant Directors of Co-operation (North and South), recommended in the Strickland Report and approved by the Secretary of State for the Colonies, was obtained on 1st March, 1931. Unfortunately, one Assistant Director fell ill almost at once and was invalided to Europe.

Expenditure.

The total expenditure, on all counts, for the calendar year 1931 was $189,083.

Progress.

The following statistics reveal the position at the end of the co-operative year:

—	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit Societies	64	1,858	83,520	36,099	134,529
Non-Agricultural Thrift and Loan Societies	26	13,172	2,652,674	165,675	2,821,254
Better Living Society	1	45			
Indian Estate Labourers' Societies	70	10,651	187,592	1,068	191,786
Co-operative Rubber Societies	3	153	1,690	215	2,080
Co-operative Union	1	7*	918	700	1,618
Total ...	165	25,886	2,926,754	203,757	3,151,267

Rural Credit Societies.

The continued fall in the prices of agricultural products, especially rubber, coconuts and *padi*, made 1931 again a difficult year for rural credit societies. Three were struck off the register during the year. Two hundred and seventeen loans amounting to $15,554 were granted as against 469 loans amounting to $44,206 in the previous year. There was a decrease in the total profits earned by the societies, which amounted to only $2,843 compared with $7,437 in the previous year. Moreover, 12 societies worked at a loss of $1,896 as compared with last year's loss of $262 incurred by six societies. Overdue loans increased by about 30 per cent.

Thrift and loan societies.

No new societies were formed. The total membership dropped from 13,809 to 13,217, the policy of restricting the membership of individuals to one society being the cause of this drop. The total paid-up subscriptions increased from $2,445,473 to $2,652,674 and the Reserve Funds from $134,659 to $165,675. Six thousand and forty-four loans were granted during the year amounting to $1,460,408 as compared with 5,642 loans amounting to $1,464,785 in 1930. Money invested in gilt-edged securities, or held on fixed deposit, or on current account at banks amounted to $1,697,794 as compared with $1,516,803 on 30th June, 1930. The gross average savings of members in these societies rose from $177 to $200, and the net average savings from $91 to $117.

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* Societies.

Indian estate labourers' societies.

The continued popularity of thrift societies amongst Indian estate labourers is shown by the registration of 12 new societies during the year, bringing the total to 68 societies with a paid-up capital of $187,592. In addition there are two Investment Unions. The membership, however, fell from 12,235 to 10,651. But the average savings have increased to $17.50 as compared with $15 last year. The decrease in membership is entirely attributable to the extensive repatriation of labourers undertaken during the year. Six thousand co-operators, thus repatriated, withdrew about $116,000.

Co-operative rubber societies.

The first society registered, which attempted to teach Malays to run a factory, was, unfortunately, not a success. Many efforts were made to keep the society going, but it was put into liquidation at the end of the year. The peculiar problems and difficulties which it encountered were dealt with closely in special reports issued by the department and the experience gained in this initial society proved of great assistance subsequently. The other two smoking, grading and selling societies of Malays have shown satisfactory progress for the year. Both societies have procured sufficient working capital of their own. In both societies the rubber prices distributed to the members were substantially above the rates obtainable by individuals selling privately.

Film propaganda.

The Rural Lecture Caravan, which is operated jointly by the Rubber Research Institute, the Agricultural Department and the Co-operative Societies Department, made 11 tours during the year. Films representing the benefits of thrift and the evils of extravagance were shown to large audiences.

General.

The movement can be considered to be making very good progress despite the world-wide financial and economic depression.

The Federated Malay States thrift societies subscribed over $700,000 towards the Federated Malay States 1931 loan.

LANDS.

The area in private occupation at the end of the year amounted to about 2,623,888 acres under agricultural titles and 205,562 acres under mining titles.

It is estimated that of the 27,500 square miles covered by the four States of the Federation, 16.1 per cent. is land in private occupation, 25.6 per cent. is reserved forest, while the balance of 58.3 per cent. is still State land, including therein land reserved for purposes other than forests.

The land revenue (including $438,056 derived from Land Sales) amounted to $5,577,409 as compared with $7,181,455 (including $1,618,073 derived from Land Sales) collected in 1930.

SURVEYS.

The demand for revenue surveys declined to half the normal volume and although economies were effected the nett cost of the department was slightly higher than in 1930. As no great increase in requisitions for survey is anticipated for some time, steps were taken to reduce the number of senior officers. The effect of these economies will not be fully felt till 1933.

Similarly the area added to the standard topographical map, 1,336 square miles, was 500 square miles less than in 1930 and will again be considerably reduced in 1932.

The Meteorological Branch was maintained, but the natural development has been postponed until the financial position has improved. The map producing and instrument repairing organisations have similarly been maintained but not developed.

The year generally may be said to have been one of adjustment to circumstances.

GEOLOGY.

Mr. J. B. Scrivenor, I.S.O., who had been in charge of the geological survey of Malaya for 28 years, retired on pension during the course of the year. His latest book "The Geology of Malaya" was published in 1931, forming a companion volume to his previous important treatise "The Geology of Malayan Ore-Deposits", 1928, and both books will always be important works of reference.

A satisfactory start was made with the detailed geological survey of the district around Sungei Siput North, and geological work was carried out also in the mountainous country of Ulu Kinta and Ulu Nenggiri, and near the Kelantan border in Ulu Pahang. In the various mining districts information from working mines was systematically collected, and advice based on geological considerations was given as regards methods of working. Old prospecting results are being gathered together and critically examined for the purpose of preparing maps, in co-operation with the Mines Department, to show which land should be reserved for mining, and which can safely be alienated for other purposes.

An aeroplane trip proved of service in mapping a prominent quartz-reef which passes into rugged country north-east of Kuala Lumpur, and it is anticipated that valuable use can be made, in certain special cases, of this means to augment ordinary methods of geological survey in Malaya. As in 1930, advice was given to the Public Works Department on questions of water supply, foundations for bridges, dams, and other structures. The usual analytical work on metals, minerals, and oils was done by the Chemist for other Government departments.

PLANTERS' LOANS BOARD.

Planters' loans.

On 1st January, 1931, the Board had outstanding as "Planters" loans, the sum of $759,100. It lent in new loans (two) and additional loans (four) during the year a further $16,850; while one property made partial repayments to the extent of $4,000. At the end of the year, the "Planters" loans outstanding were $771,950.

Building loans.

Building loans, at the beginning of the year, amounted to $1,328,730. During the course of the year, a further eighteen loans totalling $100,000 were made. Repayments in full were received from four borrowers totalling $128,500, fifty-two others made partial repayments to the extent of $177,395, while undrawn balances not required ($1,500) were cancelled. At the end of the year the Board had outstanding eighty-seven loans amounting to $1,121,335.

War Service loans.

Under the War Service Land Grant Scheme, at the beginning of the year, seventy-two ex-soldiers were indebted to the Board in respect of loans amounting to $1,733,250. Partial repayments by one estate were made during the course of the year amounting to $15,000, while two loans of $25,000 each were compounded by the acceptance of other securities in liquidation thereof, leaving at the end of the year the sum of $1,668,250 still outstanding.

Interest.

The interest earned during the year amounted to $204,901, of which $49,072 was in respect of "Planters" loans, $73,277 in respect of "Building" loans and $82,552 in respect of "War Service" loans. Interest collected totalled $135,009 and the amount credited to Federal Revenue in respect of all loans was $86,245.

Profit and loss.

The net profit earned by the Board during the year was $12,253.

Reserves.

The reserves of the Board stand at $810,000.

Capital.

The capital of the Board is $4,000,000, created by the "Planters Loans Fund Enactment, 1915".

ESTATE DUTY OFFICE.

The total estate duty collected throughout the Federated Malay States in 1931 was $506,001 as against $224,608 in 1930 and $339,438 in 1929 and represented the second highest yield since the office opened.

Payments of estate duty were, on the whole, faithfully made out for the most part by instalments. The continued trade depression has not only made payment more difficult but has very greatly lowered the value of the property actually assessed.

VOLUNTEERING.

Progress and Strength.—While 1931, on the one hand, has shown an all-round increase in the efficiency of all units, there has been, on the other hand, a serious decrease of over 250 in the strength of the Malay States Volunteer Regiment. The economic slump through which the country is passing and the consequent retrenchment of personnel on all sides have been the chief contributory factors to this fall in numbers. The Malayan Volunteer Infantry which was not affected to the same extent by these conditions showed a satisfactory increase of 120.

Reorganization.—The reorganization of the system of Command referred to in last year's report worked satisfactorily during the year, and contributed to a great extent to the increase in efficiency already referred to.

GENERAL.

Mr. (now Sir) J. Scott continued to act as High Commissioner until the return from leave of Sir Cecil Clementi, G.C.M.G., on 13th June, 1931.

Mr. C. W. H. Cochrane, C.M.G., Chief Secretary to Government, proceeded on leave on 25th July, 1931, prior to his retirement, and Mr. A. Caldecott, C.B.E., acted in the office after that date.

Mr. J. Lornie, C.M.G., British Resident, Selangor, retired on 9th May, 1931.

His Majesty the King was graciously pleased to confer the following honours at the New Year:

Honorary Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George ...	His Highness Tuanku Muhammad, K.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang-di-pertuan Besar, Negri Sembilan.

Knight Bachelor	L. H. Elphinstone, K.C., Chief Justice, Federated Malay States.
Companion of the Most Distinguished Order of Saint Michael and Saint George	J. Lornie, British Resident, Selangor.
Member of the Most Excellent Order of the British Empire (Military Division)	Regimental Quartermaster-Sergeant J. V. Booth, Malay States Volunteer Regiment.
Member of the Most Excellent Order of the British Empire (Civil Division)	A. R. Johnson, late Senior District Engineer, Federated Malay States Railways.

On His Majesty's Birthday—

Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George	Sir Cecil Clementi, K.C.M.G., Governor and Commander-in-Chief of the Straits Settlements and High Commissioner for the Malay States.
Officer of the Most Excellent Order of the British Empire (Civil Division)	L. A. Allen, M.C.S., recently British Adviser, Perlis.
Companion of the Imperial Service Order	J. B. Scrivenor, Director, Geological Survey, Federated Malay States.

Certificates of Honour were awarded to the following in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Dr. K. T. Khong, J.P.;

Raja Shahbudin bin Raja Dagang, Dato' Sri Bijaya Indera;

Dato' Sri Bijaya Uda bin Haji Yahya;

Raja Haji Mohamed Yacob bin Abdul Razak;

Low Leong Gan, M.S.C., J.P.;

H. B. Talalla, J.P.

A Durbar of the Rulers of the Federated Malay States was held on the 18th August at Sri Menanti, the residence of His Highness the Yang-di-pertuan Besar of Negri Sembilan.

The decline in trade and revenue, consequent upon the world-wide depression and over-production of rubber and tin, continued throughout the year. Considerable retrenchments in public expenditure were effected on lines laid down by a committee known as the Departmental Expenditure Committee; but by the end of the year it became clear that the revenue for 1932 would fall far short of fifty-six million dollars, at which figure the budget had been balanced in November. The future prosperity of the Federation depends on the achievement of economies in administration and on a widening of its industrial basis; the easy wealth that has accrued in the past from tin and rubber induced a concentration of vision and effort on these two commodities to the exclusion of others, with the result that the Peninsula imports much that it might itself produce.

The title and arrangement of this Report differs from those of previous years, being cast in a new form approved by the Secretary of State in June last for adoption in all British Colonies and Protectorates.

A. CALDECOTT,
Acting Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
27th May, 1932.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8.434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050.382	...	...	712,898	2,254,742	653,157	1900
1901	17.541,507	17,273.158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71.350,243	47,258	8,438,775	...	...	661,668	2,856,640	714.435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605.029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171.243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162.026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35.056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584	84,660,975	201,393,405	349,012,595	67,041	15,424,409	261,352	4,312,922	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870	82,470,192	168,020,418	213,652,044	62,065	9,127,460	249,675	1,086,370	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659	62,163,328	106,201,211	125,177,183	51,250	5,502,101	243,886	547,411	4,832,700	12,912,579	1,723,117	1931

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* As now corrected.

‖ Excluding bullion and specie.

§ *Vide* foot-note on page 94.

† The figures for previous years included items now omitted owing to reclassification of revenue.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1931.

Dr. *Cr.*

	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96			(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
		379,051 24			
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00				
		912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00				
		3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00				
		801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00				
		200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00				
		200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00				
		197,404 28			
Miscellaneous—Stamp, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamp, etc., 4½ per cent. Loan	4,475 18				
		10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03				
		60,682 21			
			5,888,164 69		
To Loan Works—					
Public Works Department	...	20,367,692 10			
Posts and Telegraphs Department	...	5,433,682 05			
Topographical Survey Department	...	763,362 66			
Topographical Survey of Forest Reserve ...	...	67,063 83			
Forest Department, Perak	...	15,244 48			
Railway—Open Lines	...	9,153,104 81			
„ Construction	...	37,775,424 96			
			73,575,574 89		
To Balance ...	...	...	721,974 71		
			$80,185,714 29		$80,185,714 29

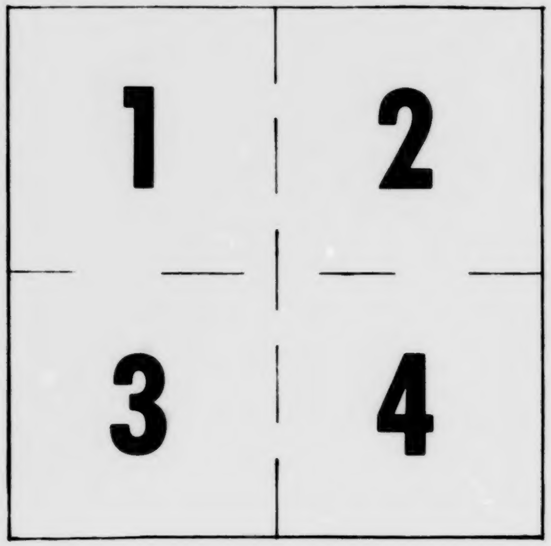
APPENDIX C.

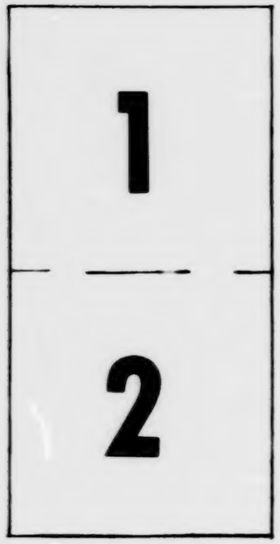
Dr. **F.M.S. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1931.** Cr.

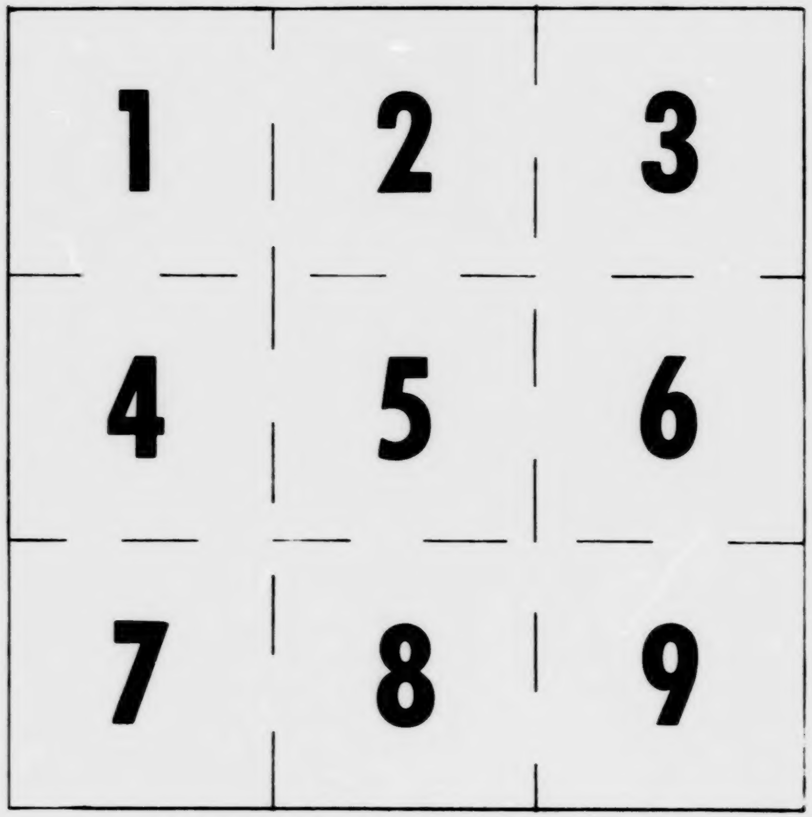
	$ c.	$ c.		$ c.
To Expenses of Issue—			By Loan Subscription—	
(*a*) Discount on issue price ...	320,000 00		4½ per cent. 1950 issued at 98 in May, 1931	16,000,000 00
(*b*) Commission and charges ...	40,000 00			
		360,000 00		
To Loan Works—				
Public Works Department ...	1,386,682 00			
Electrical Department	1,165,454 61			
Railway Department...	2,057,308 78			
		4,609,445 39		
To Balance	...	11,030,554 61		
		16,000,000 00		16,000,000 00

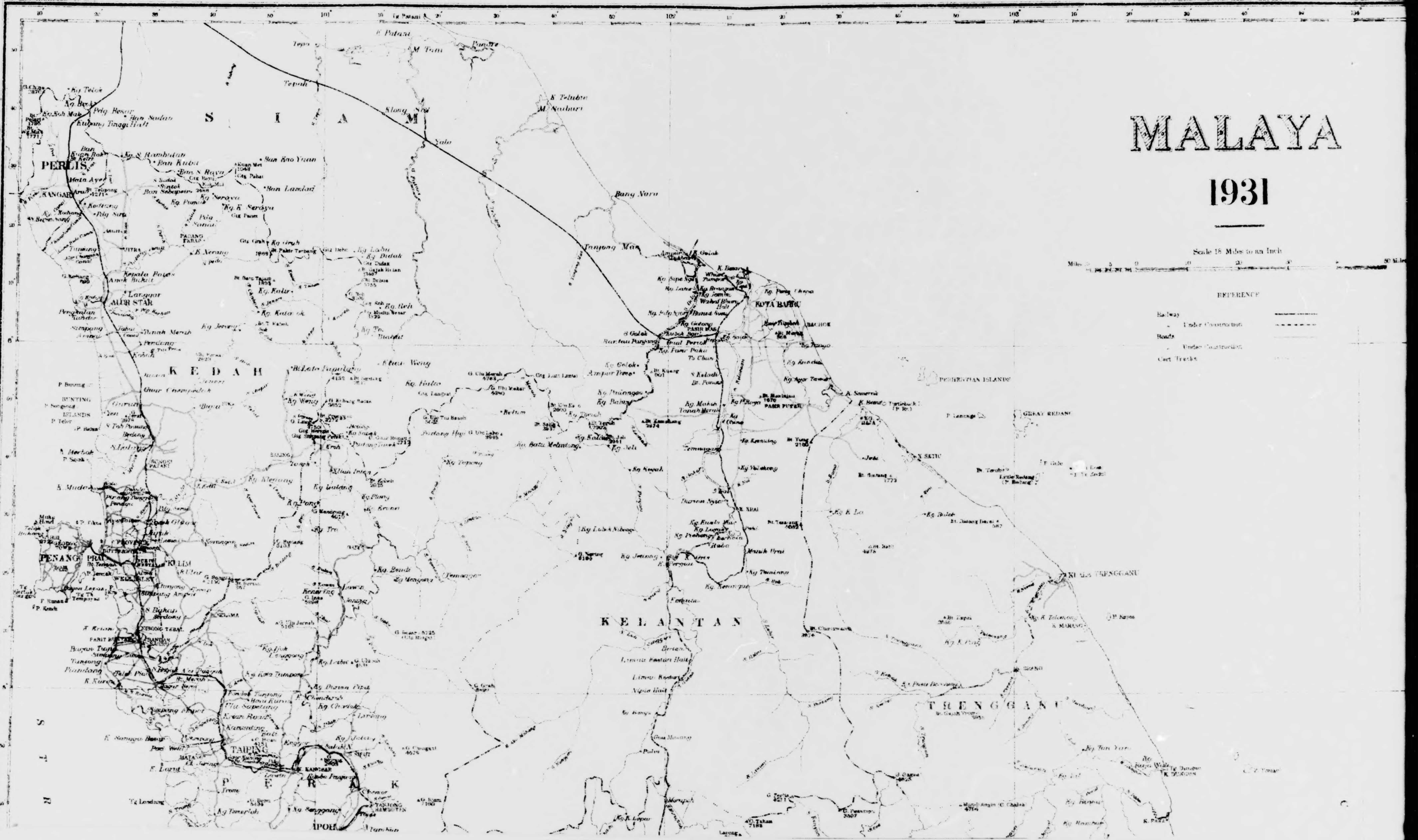
Federated Malay States Government Press.

Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.









MALAYA

1931

Scale 18 Miles to an Inch

Miles 5 0 10 20 30 50 Miles
REFERENCE
Railway
Under Construction
Roads
Under Construction
Cart Tracks
S I A M
PERLIS
KANGAR
ALOR STAR
K E D A H
PENANG
PRAI
WELLESLEY
KULIM
TAIPING
P E R A K
IPOH
KOTA BAHRU
PASIR MAS
PASIR PUTEH
BACHOK
K E L A N T A N
PERHENTIAN ISLANDS
GREAT REDANG
KUALA TRENGGANU
T R E N G G A N U
K. DUNGUN
Tg. Patani
Tanjong Mas
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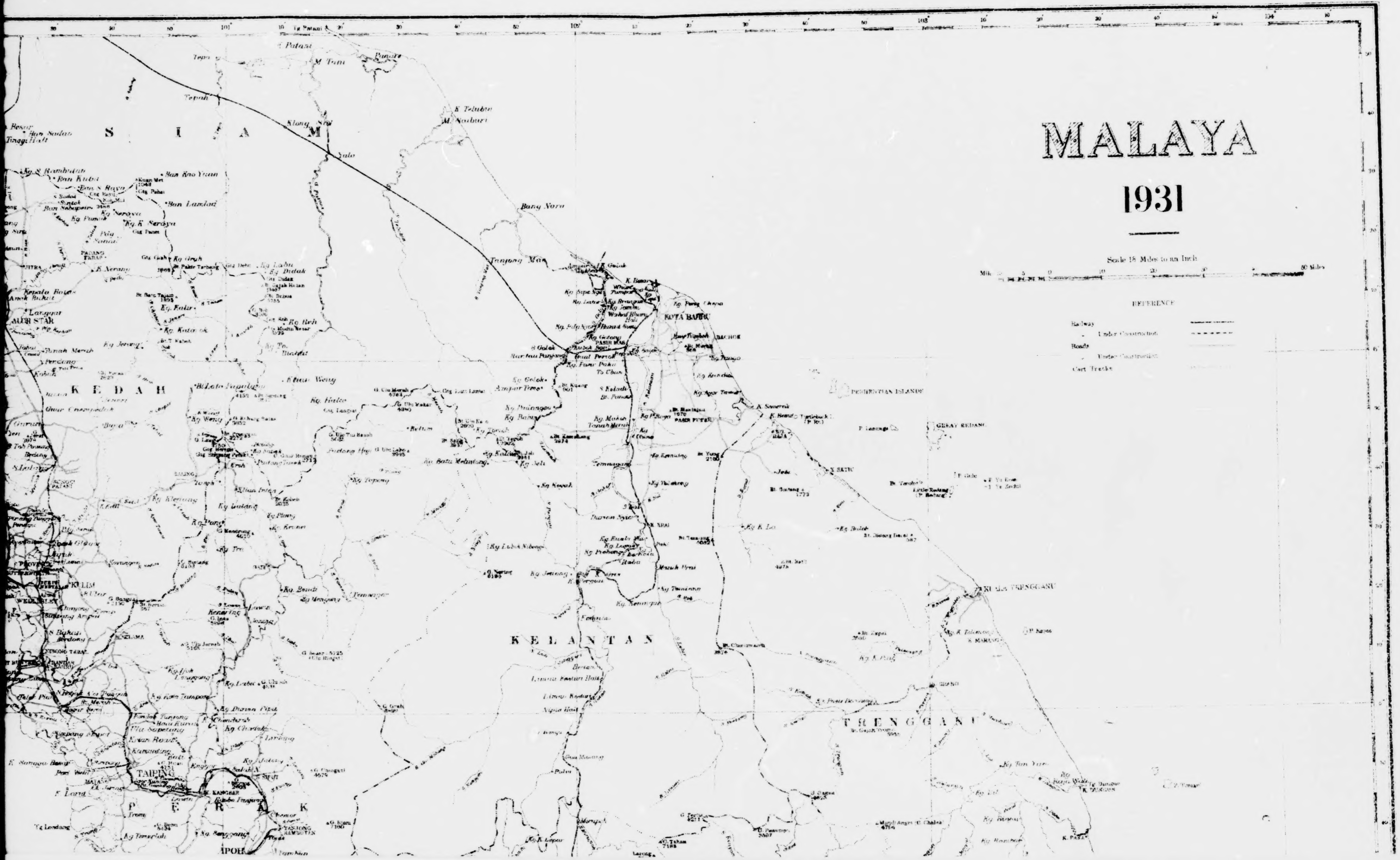
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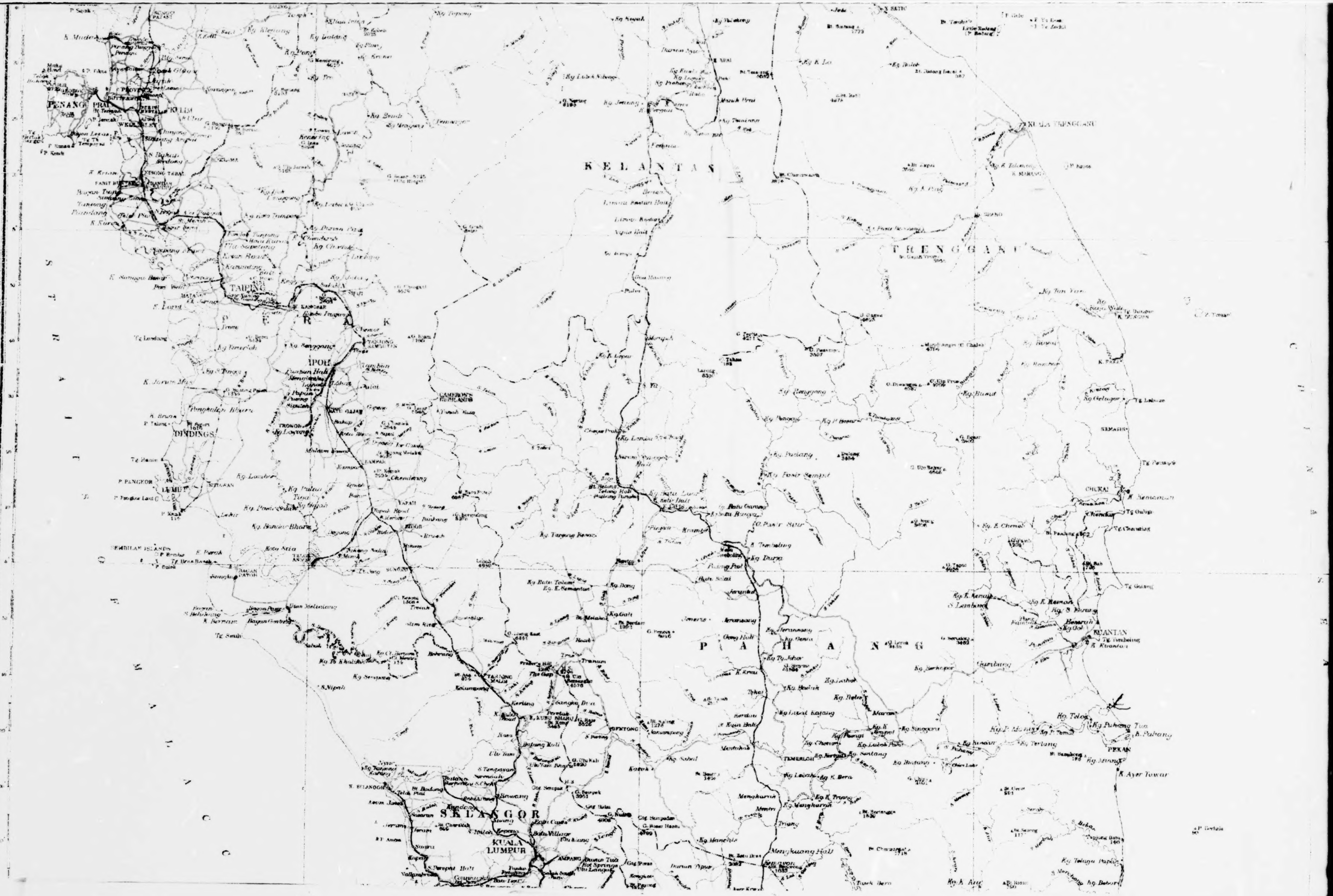
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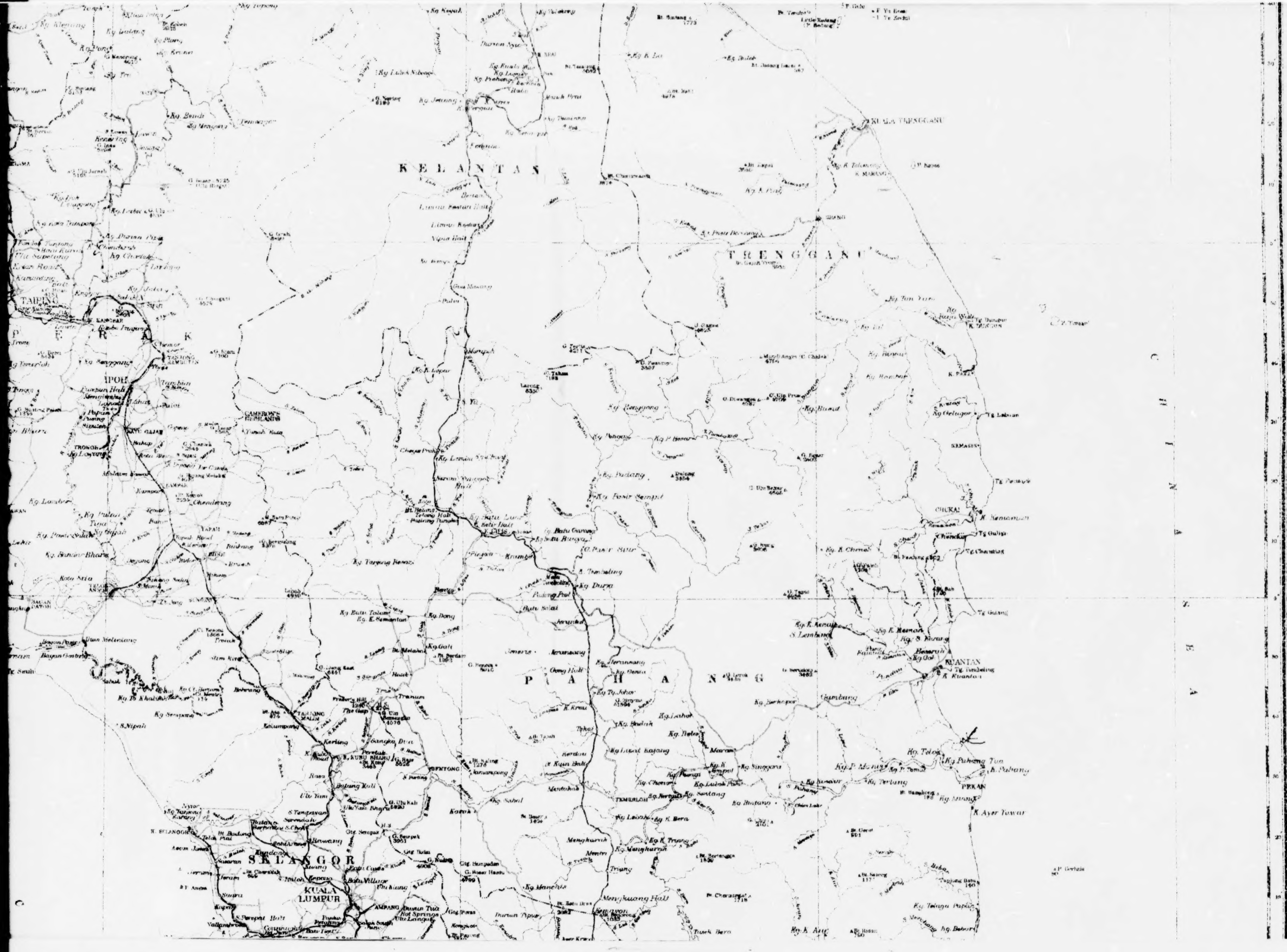
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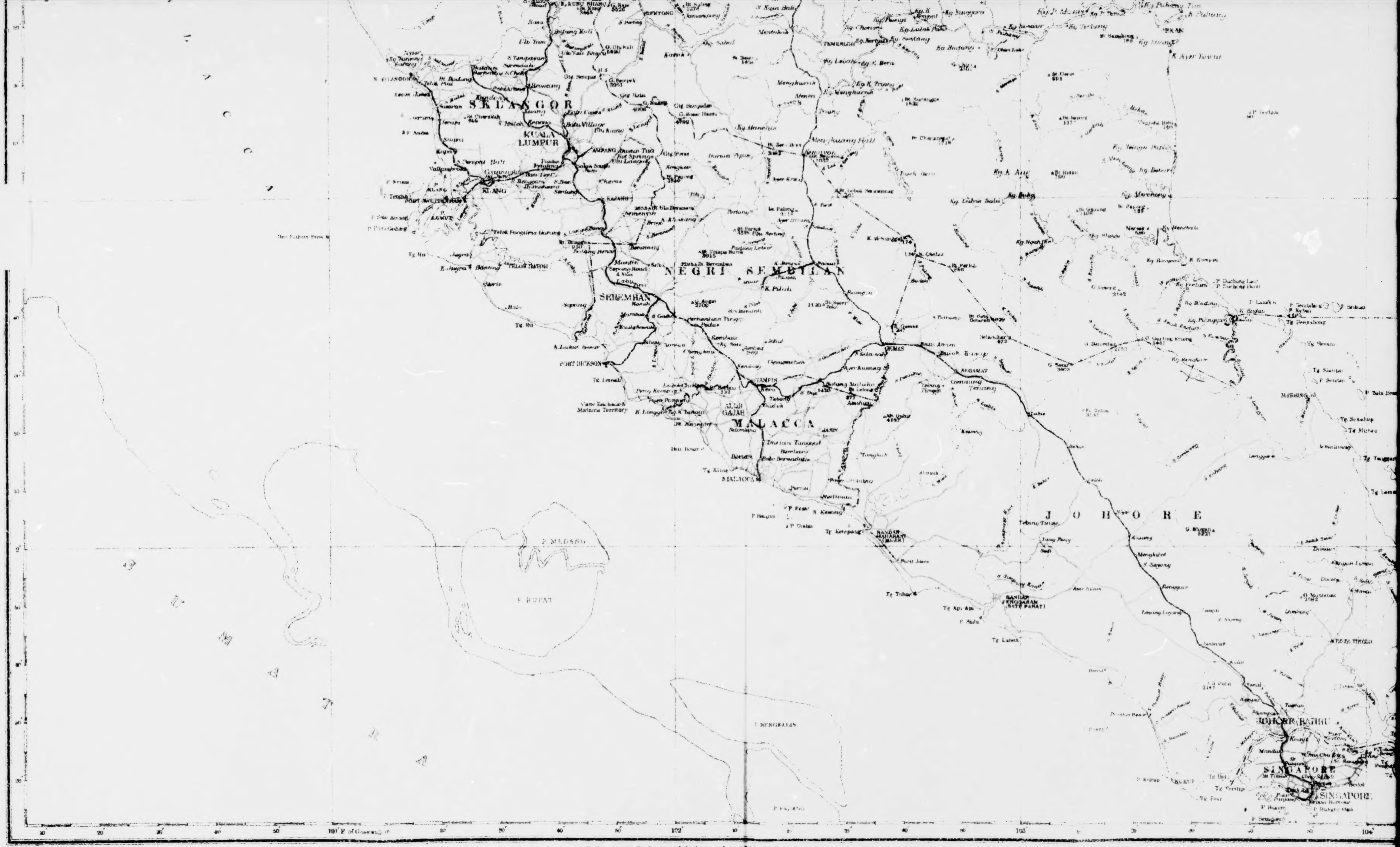
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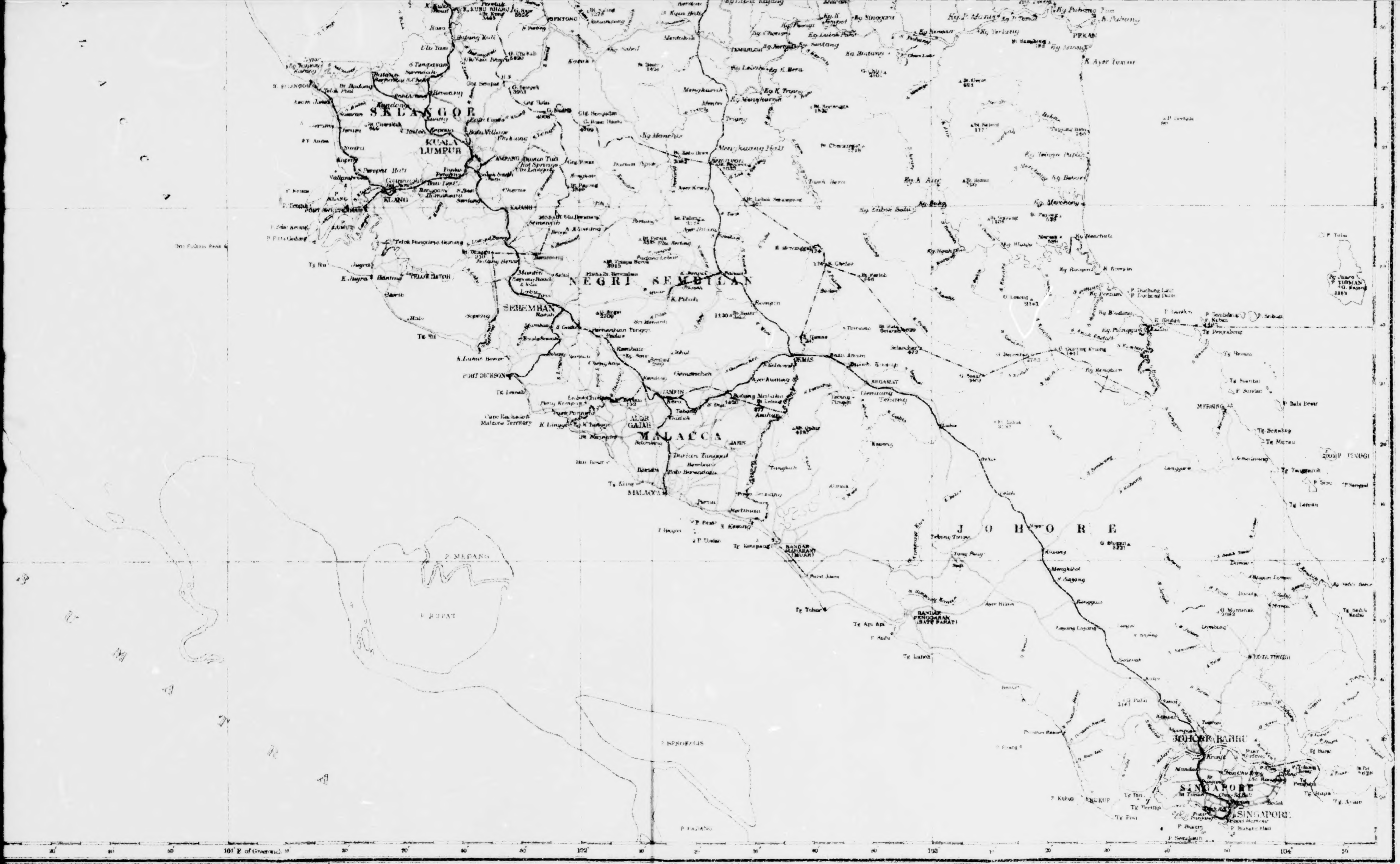
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ANNUAL REPORT

ON THE

SOCIAL AND ECONOMIC PROGRESS OF THE PEOPLE OF THE FEDERATED MALAY STATES

FOR

1932

BY

M. B. SHELLEY, M.C.S.,
Acting Chief Secretary to Government, Federated Malay States.

KUALA LUMPUR:
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CHAPTER I.

Geography, including Climate and History.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, K.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

Selangor (3,150 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,550 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D.,

Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungai Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungai Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Muhammad, G.C.M.G., K.C.V.O., ibni Al-Marhum Antah, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15° F. at coastal stations and between 15° and 20° F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100° F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December,

followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 239 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 110 inches and Cameron Highlands 108 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 55°F. and at Tanah Rata 42°F. or only 10°F. above freezing.

CHAPTER II.

Government.

Constitution of the States.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

At the beginning of the year 1932 the State Council of Negri Sembilan was reconstituted and now comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undangs, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undangs for amendment or confirmation, and assent is finally given by His Highness and the Undangs. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

In the States of Perak, Selangor and Pahang the State Councils have been further strengthened to fit them for their increased legislative and financial responsibilities.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State. The Federal Council, which was reconstituted in 1927, consists of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President; the Chief Secretary to Government, Federated Malay States; the four British Residents; the Legal Adviser; the Financial Adviser; the Principal Medical Officer; the Controller of Labour; the General Manager for Railways; the Director of Education; the Commissioner of Trade and Customs; the Secretary for Chinese Affairs; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. It still retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 24 districts in each of which there is a Sanitary Board, a Licensing Board, a Health Board and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Health Boards are responsible for health matters in rural districts. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The estimated population of the Federated Malay States for the year 1932 has been derived from the census figures of 1931, which are those of the population found on 1st April of that year. The figures for 1932 have been calculated from these by the process of geometrical progression, which has been found to be the most reliable method of calculation for an unstable population such as that of Malaya. The population as so calculated is 1,770,486. The distribution among the different States was as follows:

TABLE I.

ESTIMATED POPULATION OF THE FOUR STATES.

	Malaysians.	Chinese.	Indians.	Non-Asiatic.	Others.	Total.
Perak	277,015	340,105	163,503	2,578	6,930	790,131
Selangor	127,430	252,030	159,123	2,756	11,818	553,157
Negri Sembilan	88,468	96,487	52,654	876	3,620	242,105
Pahang	112,283	54,832	15,844	412	1,722	185,093
F.M.S.	605,196	743,454	391,124	6,622	24,090	1,770,486

The population at mid-year 1932, with birth and death-rates, was as follows:

Population.	Total births.	Birth-rate.	Total deaths.	Death-rate.
1,770,486	55,171	31.2	29,997	16.9

No method of correction is employed in estimating the birth and death-rates.

The estimate of the total population, as shown above, is probably an over-estimate of the actual population during the year, since there continued during the year an abnormal emigration of Indians and Chinese and a much restricted immigration of these races.

Figures of arrivals and departures of Chinese and Indians by sea to and from Malaya are shown in the following summary:

NET ARRIVALS (+) AND DEPARTURES (−) FOR THE YEARS 1931 AND 1932.

	1931.	1932.
Chinese	−133,815	−128,275
Southern Indians	− 81,206	− 66,306
Total	−215,021	−194,581

The available immigration and emigration figures for the Federated Malay States, which are not those of the total movement of population but represent a large proportion of that movement, indicate a loss to the Federation of 61,618 Indians, 57,612 Chinese, 120,836 in all, for the period 1st April, 1931, to 30th June, 1932. During the year there was an excess of 25,174 births over deaths. Available figures show a reduction of 90,000 in the population during the period 1st April, 1931, to 30th June, 1932. The figure derived for the mid-year by calculation by a method of geometrical increase from the mid-year figure of 1931 must, therefore, be an over-estimate.

Such over-estimation of the actual population must, of course, affect the calculated birth and death-rate, both of which were probably in excess of the calculation.

A calculation based on the excess of emigrants over immigrants and births over deaths shows an estimated population of 1,623,000 for mid-year, 1932. If this figure is employed for calculation of birth and death-rates the resulting figures for these rates are 34.0 and 18.5, respectively.

BIRTHS.

Births registered during the year numbered 55,171, a decrease of 2,286 on the previous year's total of 57,457. This decrease was distributed generally throughout the States and may in part be attributed to abnormal emigration from the country. Particulars of births registered are included in Tables II and III.

TABLE II.

BIRTH-RATES IN THE F.M.S. ACCORDING TO RACE COMPARED FOR 1922-1932.*

	Malaysians.	Chinese.	Indians.	All races.
1922	36.1	17.3	21.1	25.5
1923	36.0	17.8	20.2	25.3
1924	37.1	21.1	21.9	27.3
1925	36.1	23.3	23.5	28.1
1927	35.9	30.7	23.5	30.5
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	28.6	29.1	31.2

TABLE III.

SUMMARY OF BIRTH-RATES IN THE F.M.S. PER MILLE ACCORDING TO STATE AND RACE FOR 1932.

	Malay.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	36.5	26.0	27.7	20.2	19.6	30.0
Selangor	37.2	32.1	32.5	29.4	8.8	32.9
Negri Sembilan	37.0	27.3	24.3	2.3	11.6	29.9
Pahang	35.7	30.3	25.3	2.4	3.5	32.8
F.M.S.	36.6	28.6	29.1	20.5	12.9	31.2

The birth-rate per thousand living persons is calculated at 31.2 compared with 33.2 in 1931 and 27.2 in the previous census year 1921.

Reference to the tables will show, as has been pointed out in previous reports, how little variation there has always been in this rate so far as the Malay community is concerned.

The rate for Chinese, 28.6 per mille, has decreased slightly but can be considered a satisfactory rate when allowance is made for the over-estimate of the population.

The rate for Indians, 29.1 per mille, is below that for 1931; but here again allowance must be made for the adverse balance of emigration over immigration.

Of the total births, 29,020 were males and 26,151 were females giving a birth sex ratio of males to females of 111 : 100.

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

Deaths.

The total number of deaths recorded was 29,997, being a decrease of 2,874 from the 1931 total. There were 17,496 deaths among males and 12,501 among females, the sex ratio being 140: 100, as compared with 148: 100 in 1931.

The crude death-rate is calculated as being 16.9 per thousand living persons as compared with 19.1 in 1931 and 28.5 in 1921.

The death-rate for 1932 is the lowest ever recorded and making all allowance for under-estimation as a consequence of over-estimation of the total population, the rate may be taken to show continued improvement in the state of the public health. This is borne out by experience generally. It must be remembered, however, that while repatriation continues on an abnormal scale a large number of decrepits or weakly persons are leaving the country.

Death-rates are shown in detail in Tables IV and V.

Table IV.

Death-rates in the F.M.S. according to Race compared for the Years 1922-1932.*

	Malays.	Chinese.	Indians.	All races.
1922	24.3	24.6	29.7	25.6
1923	24.6	23.5	24.9	24.1
1924	24.2	23.3	21.9	23.2
1925	22.6	23.9	22.8	22.9
1927	26.4	34.1	32.9	30.7
1928	24.4	30.6	30.2	28.0
1929	21.8	29.6	25.4	24.6
1930	20.4	30.4	21.8	24.1
1931	18.8	18.9	20.5	19.1
1932	19.1	16.4	15.7	16.9

Table V.

Summary of Death-rates in the F.M.S. per Mille according to Race and State for 1932.

	Malays.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	19.2	16.0	15.2	3.1	10.8	16.9
Selangor	15.7	16.7	15.9	3.6	3.5	15.9
Negri Sembilan	19.8	15.8	16.1	2.3	4.7	17.1
Pahang	22.2	17.5	16.9	2.4	1.1	20.1
F.M.S.	19.1	16.4	15.7	3.2	5.6	16.9

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

The death-rate among Malays was 19.1. This figure is probably near the truth: it is very near the figure for the previous year, which was 18.8. Death-rates for Indians and Chinese, figures for which are liable to considerable error, were 15.7 and 16.4 respectively.

Uncorrected sex ratios for the three principal races are given in the following table:

RATIO OF MALE DEATHS TO EVERY 100 FEMALE DEATHS—BY RACES.

Malays	107
Chinese	199
Indians	120

These ratios are, but for slight variation, the same as those for 1931.

If the death-rates found by States and races are examined it will be seen that, as regards Malays, Pahang has the highest rate (22.2), while Selangor has the lowest (15.7); as compared with the highest in Pahang the previous year (23.8) and the lowest in Selangor again that year (14.1).

With regard to Chinese the rates are very similar now throughout the Federation; Pahang has the highest rate of 17.5 per mille. In the case of Indians, Pahang shows the highest rate (16.9) and Perak again enjoys the lowest rate (15.2), although the rate in Selangor is only 0.7 per mille higher.

Table VI shows the mortality according to different age groups.

TABLE VI.

SUMMARY OF DEATHS FROM ALL CAUSES AT DIFFERENT AGES ACCORDING TO STATES FOR THE YEAR 1932.

State.	Age.									Grand total.
	0	1 year.	5 years.	10 years.	20 years.	30 years.	40 years.	50 years.	60 years.	
Perak	3,156	2,210	533	709	1,401	1,366	1,287	1,098	1,588	13,348
Selangor ...	2,364	1,373	242	444	964	1,030	803	711	858	8,789
Negri Sembilan	1,050	578	151	206	513	536	423	340	347	4,144
Pahang ...	1,002	639	156	186	366	387	348	291	341	3,716
Total ...	7,572	4,800	1,082	1,545	3,244	3,319	2,861	2,440	3,134	29,997

It will be seen how heavy the mortality rate is during the early years of life.

Actually over 40 per cent. of the total deaths is recorded as occurring under the age of five years, and about a quarter of the total deaths is found among infants, compared with about one-twelfth in England.

INFANT MORTALITY.

The ratio of deaths in infants (i.e., persons under one year of age) to every thousand live births was 137, as compared with 139 in the previous year. Table VII gives particulars of these rates as they affect the principal races in the Federated Malay States.

TABLE VII.

SUMMARY OF INFANT MORTALITY RATES IN THE F.M.S. ACCORDING TO RACES AND STATES FOR THE YEAR 1932.

	Malays.	Chinese.	Indians.
Perak	131	132	143
Selangor	113	143	129
Negri Sembilan	139	157	139
Pahang	170	158	147
Average rate ...	135	141	136

No rates are shown for either non-Asiatics or "others", as the numbers involved in each case are too small to allow of a reliable rate being calculated.

As these rates are of some value, being calculated on entities of ascertained quality, they may be considered in some detail, as they furnish a definite criterion of the state of health among the nationalities and in the districts where they are noted.

The rate observed in 1921 was 183, but that rate and the rates for some succeeding years cannot be accepted as accurate, as the registration of both births and deaths could not in these earlier years be considered so comparatively reliable as it is to-day.

Taking the peak year of the last decennium, when a rate of 203 was recorded, a progressive and very marked fall from that figure can be seen, amounting to over 30 per cent. decrease, or a reduction of nearly one-third of the infant mortality rate as recorded in 1927. This is very satisfactory so far as it goes, but it must be kept in mind that still one-quarter of all the deaths in the Federated Malay States are infant deaths. The rate in England during 1931 was 66 for every thousand living births.

The rate among Malays was again lower than that among the Indians and Chinese, but the rate among Malays in Pahang (170) was the highest rate among any nationality. This latter, however, shows a vast improvement on the highest rate recorded in 1930, which was 255 among Indians in Negri Sembilan.

The highest rates among Chinese (158) and Indians (147) were in Pahang.

The rate for Malays is the same as in 1931, but those for Chinese and Indians have fallen in each case compared with the 1931 figure.

The bulk of these deaths (some 66 per cent.) was attributed, as in the past, to "fever of undefined type" and to "convulsions".

MARRIAGES.

As there is no registration of Chinese marriages and the registration of Hindu marriages is not compulsory, the number of marriages cannot be determined.

CHAPTER IV.

Health.

The health of the country showed continued improvement during 1932. There was a reduction in the total number of deaths, as reported in the preceding chapter, while figures for hospital admissions show a corresponding great reduction.

There can be little doubt that a large part of this apparent improvement must be ascribed to the fact that large numbers of labourers, both Indians and Chinese, were repatriated during the year. Among these were, of course, very many comparatively unhealthy, or actually sick or decrepit, persons, who would have been likely to swell the total of deaths and hospital admissions, had they remained in the country.

On the other hand there is good reason for believing that, apart from any question of repatriation, the year 1932, like the year before, was healthy. This is shown by the low morbidity figures for communities unaffected by emigration, e.g., the Malay population, which were practically the same as the low figures recorded for the previous year.

Since malaria is the predominant cause of sickness and death in the Federated Malay States, and since the records for 1932 still show a very great reduction in the number of malarial cases, the statement may again be made that the year was comparatively healthy because there was less malaria. At the same time there was a lower incidence also of other diseases, e.g., enteric fevers, which are not directly connected with malaria.

The following table sets out the principal causes of death in the population of the four States of the Federation during 1932:

SUMMARY OF PRINCIPAL CAUSES OF DEATH ACCORDING TO STATES FOR THE YEAR 1932.

State.	CAUSES OF DEATH.														
	Enteric fever.	Typhus fever.	Relapsing fever.	Malaria.	Fever (type not diagnosed).	Smallpox.	Diphtheria.	Influenza.	Cholera.	Dysentery.	Plague.	Acute poliomyelitis.	Meningococcal meningitis.	Tetanus.	Tuberculosis of the respiratory system.
Perak ...	28	1	...	483	5,475	...	18	2	...	164	...	...	4	44	542
Selangor ...	11	12	...	346	2,392	...	12	15	...	221	...	...	4	26	524
N. Sembilan ...	15	3	...	210	1,325	...	5	8	...	57	...	...	1	13	276
Pahang ...	5	2	...	120	1,728	...	11	9	...	23	...	...	2	20	171
Total ...	59	18	...	1,159	10,920	...	46	34	...	465	...	...	11	103	1,513

State.	CAUSES OF DEATH.										Grand total.
	Other forms of tuberculosis.	Syphilis.	Cancer.	Beri-beri.	Convulsions (non-puerperal, 5 years and over).	Convulsions (under 5 years of age).	Diseases of the respiratory system.	Diarrhoea and enteritis.	Ankylostomiasis.	Other diseases.	
Perak ...	70	64	91	32	13	1,460	727	192	39	3,899	13,348
Selangor ...	30	43	62	97	9	1,353	910	384	22	2,316	8,789
N. Sembilan	14	15	24	60	...	514	414	109	5	1,076	4,144
Pahang ...	...	5	8	75	...	385	284	150	50	668	3,716
Total ...	114	127	185	264	22	3,712	2,335	835	116	7,959	29,997

PREVAILING DISEASES.

Malaria.—This remains the principal disease of the country, in spite of the continuous concentrated effort for many years past to eliminate it. It is impossible accurately to assess the number of deaths due to malaria annually, since in only a small proportion of the total deaths is an accurate diagnosis possible. Deaths reported from Government hospitals as due to malaria may be accepted as correct. It is impossible to say how many of the deaths registered elsewhere under the general heading "fever" are actually cases of malaria. The following figures for the last five years are significant and encouraging:

	Deaths registered as due to "fever".	Deaths recorded in Government hospitals as due to malaria.
1928	20,053	2,637
1929	16,968	1,795
1930	16,721	1,713
1931	13,180	1,065
1932	12,079	707

Preventive measures against malaria were carried out along the lines now established throughout the Federated Malay States. They may be summarised as follows:

(*a*) Notification of cases, and investigation of conditions associated with fresh infections;

(*b*) Routine and special surveys of anopheline breeding. In urban areas endeavour is made to control the breeding of all species of anophelines and, where possible, of culicines, within an area extending to half a mile outside the boundary of the town;

(*c*) Temporary and permanent anti-larval measures;

(*d*) Free distribution of quinine;

(*e*) Periodical inspection of Government and estate labourers;

(*f*) Propaganda and education;

(*g*) Special research, by the staff of the Institute for Medical Research, Kuala Lumpur, Health Officers, and others.

Dysentery and Diarrhoea.—This group of diseases was responsible for 1,300 deaths during the year, or less than 5 per cent. of the total deaths: this compares with 1,606 deaths in 1931, which were 5.0 per cent. of the total for that year.

Pneumonia.—Diseases of the respiratory system, other than tuberculosis, accounted for 2,335 deaths or 8 per cent. of the total. Most of these deaths are caused by pneumonia. The corresponding figure for 1931 was 2,786. The case mortality rate in Government hospitals still remains at a high figure, since so many patients only seek admission at a late stage of the disease.

Tuberculosis.—Pulmonary tuberculosis must be considered one of the gravest causes of sickness and death in the Federated Malay States, especially in the town population. It is impossible to estimate the total number of cases, and it is probable that many fatal cases are registered under other headings. But the statement made in previous reports still holds good, that a study of the figures over a period of years does not show that the incidence of the disease is increasing. The records of deaths occurring in Government hospitals are likely to be more accurate than records of deaths occurring elsewhere, so that a fair indication of the prevalence of the disease during the last ten years may be gained from a table showing the yearly number of deaths in Government hospitals reported as due to pulmonary tuberculosis, and the ratio of that figure to the estimated population for the year, as under:

Year.	Deaths in Government hospitals.	Ratio per 100.000 population.
1923	1,006	72.3
1924	1,037	73.1
1925	1,051	72.6
1926	995	67.4
1927	1,118	74.2
1928	1,074	70.0
1929	1,078	64.4
1930	1,061	61.5
1931	975	56.6
1932	919	51.9

Leprosy.—It was stated in last year's report that the average number of cases of leprosy annually detected and segregated in the Federated Malay States is in the neighbourhood of three hundred; the figures for 1932 support this statement. The new settlement at Sungei Buloh, opened in 1930, is one of the finest institutions for lepers in the world, and great progress has been made in the care and treatment of lepers under the favourable conditions afforded at Sungei Buloh. It was found possible to release 91 patients as non-infective, which is most encouraging.

Venereal Diseases.—The problem of venereal disease has received special attention in Malaya. For some years the number of cases applying for treatment showed a large annual increase, which was ascribed to the intensive efforts made to reach as many sufferers as possible. During the last three years the total number of cases has been decreasing. It may at least be hoped that this decrease represents an actual decrease in the incidence of disease, as the result of intensive efforts at treatment, associated, perhaps, with the recent measures taken for the suppression of brothels. The figures for the total number of cases of venereal disease treated in the Federated Malay States during the last five years are as follows:

1928	35,366
1929	40,802
1930	35,734
1931	31,817
1932	24,866

HEALTH OF THE LABOUR POPULATION.

The only class of labour for which special health statistics are available is the labour employed on agricultural estates. The figures for 1931 showed a great improvement on the figures for 1930, and 1932 showed a still further great improvement, the death-rate per mille dropping from 10.6 in 1930 to 7.8 in 1931, and still lower to 5.4 in 1932. It must be remembered that it is this class of labour which has been most affected by repatriation; and that the labour population on estates during 1932 had lost by repatriation most of its sick and weakly; at the same time there is clear indication of a more satisfactory state of health generally during the last two years.

HOSPITALS AND OTHER MEDICAL INSTITUTIONS.

The following table shows the average daily number of patients in the Government hospitals of each State, the total number of patients admitted during the year, the total number of deaths, and the death-rate per hundred admissions, for the years 1931 and 1932:

State.	Average daily number of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1931.	1932.	1931.	1932.	1931.	1932.	1931.	1932.
Perak ...	2,094	1,582 ...	44,742	44,383 ...	3,374	3,386 ...	7.54	7.62
Selangor ...	1,274	1,023 ...	24,214	20,694 ...	2,214	1,825 ...	9.14	8.82
N. Sembilan ...	811	670 ...	14,446	12,279 ...	1,190	954 ...	8.23	7.77
Pahang ...	470	400 ...	9,535	8,622 ...	663	583 ...	6.95	6.73
Total ...	4,649	3,675 ...	92,937	85,978 ...	7,441	6,748 ...	8.00	7.85

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries), apart from those treated at special institutions such as Infant Welfare Centres, Venereal Disease Clinics, etc., was 696,838: the corresponding figure for 1931 was 644,065.

Infant Welfare Centres.—There are six centres at Kuala Lumpur, Klang, Ipoh, Taiping, Teluk Anson and Seremban. The total number of attendances during the year was 171,243. In addition to the work done at the centres themselves, a very great number of visits were paid by the staff to the homes of the people for the purpose of instruction and assistance in maternity and child welfare.

Central Mental Hospital.—Admissions during the year numbered 807, or 120 less than the average annual admissions for the previous five years. In spite of the fewer admissions the number of discharges was up to a satisfactory level, the number being 534, which is over the average annual figure if the exceptional figure for 1931 is discounted. There was, however, a net increase of 66 during the year, the total number of patients at the end of the year being 2,572, so the state of overcrowding continues.

Decrepit Settlements.—The new Decrepit Settlement at Sungei Buloh, which was opened in 1930, was filled to capacity during part of the year, but by careful elimination of unsuitable cases the number of inmates was reduced to 584 at the end of the year. Decrepit wards are still maintained at Kuala Lumpur and Taiping.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

HOUSING OUTSIDE SANITARY BOARD AREAS.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part Estate or Mine Managers and fairly well-to-do Asiatics, but their houses are as a rule of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Production.

MINERALS.

Tin.

The export of tin-ore, reduced to a metallic basis at 72 per cent., and of block tin during the year was 27,091 tons, compared with 51,250 tons in 1931, and 62,065 tons in 1930. The export of tin-ore represents about 99 per cent. of the total. The 1932 exports were 47.14 per cent. lower than those of 1931. The reduction was the direct result of restriction.

Price of tin.

On 7th and 8th September was recorded the highest price during the year, namely, £159.5.0; and on 12th April the lowest, £104.10.0; these prices at par would have been £114 and £81, respectively, though the tendency in the latter part of the year was for tin to carry a price which was affected less and less by the relation of sterling to gold.

The control exercised during the year by the International Pool and the second unofficial pool varied in its effect. During the first two months the price remained remarkably steady between £140 and £145 a ton. In the subsequent four months, heavy speculation mostly of continental origin unsettled the market and the price dropped to as low as £104.10.0. During July and August recovery set in and by September the price was controlled between £150 and £160, and so held to the end of the year. Consumption was very disappointing and its lack prevented the amended Byrne Scheme, which was put into operation in July for twelve months on a basis of an international quota of 33⅓ per cent., from having its full effect in reducing stocks. Even so, the total of the visible supplies and of the Straits Settlements "Carry-over" showed a decrease of 3,776 tons in 1932 as compared with an increase of 11,548 tons in 1931. The details are shewn in the following table:

Date.	Visible supplies.	"Carry-over" in the S.S.	Total.
	TONS.	TONS.	TONS.
January 1st ...	... 50,938	... 8,293	... 59,231
December 31st	... 45,125	... 10,330	... 55,455
Difference	...– 5,813	...+ 2,037	...– 3,776

The International Pool held 21,000 tons at the end of the year.

The following table gives the prices ruling during the last seven years in dollars per pikul:

	1926.	1927.	1928.	1929.	1930.	1931.	1932.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Highest ...	157.50	159.00	131.50	115.50	92.25	71.37½	81.75
Average ...	144.59½	144.93	114.18	104.37	72.89	60.29	69.76
Lowest ...	131.75	127.37	103.63½	89.25	54.12½	50.37½	52.87½
Fluctuation ...	25.75	31.63	27.86½	26.25	38.12½	21.00	28.87½

Tungsten ores.

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows:

	Wolfram.		Scheelite.
1931	Nil	...	368 tons
1932	Nil	...	302 ,,

Gold.

The production of gold was 29,296 ounces compared with 29,462 ounces in 1931.

The Raub-Australian Gold Mining Co. Ltd. produced 27,755 ounces compared with 24,728 ounces in 1931.

Exports amounted to 25,757 ounces.

Coal.

The production of coal from the Malayan Collieries Ltd., Selangor (the only producer), was 277,848 tons, a decrease of 124,507 tons compared with the previous year.

Consumption was as follows:

	Tons.
Federated Malay States Railways	159,672
Mines	73,359
Other Federated Malay States consumers ...	21,092
Exported	272
Consumed at the Collieries	23,453
Total ...	277,848

The total output of coal from the Malayan Collieries Ltd. (Selangor), for the last five years, was as follows:

	Tons.
1927	449,580
1928	556,590
1929	661,514
1930	565,573
1931	402,355

Labour.

The labour force engaged in mining (including dulang pass holders) was 53,430 at the end of the year. The figures for the preceding four years were:

1931	65 777
1930	89,517
1929	113,415
1928	119,550

This total does not include labour employed on the extraction and transport of firewood.

The classification of labour was as follows:

Contract	11,053
Wages	22,286
Tribute	10,999
Dulang	8,975
Individual licensees	117
Total	53,430

Contract labour constituted 20.7 per cent. of the total labour force.

The great reduction in the labour force was the direct result of tin restriction and large numbers of unemployed mining coolies were repatriated to China by Government.

AGRICULTURE.

Agriculture shares with mining the position of primary importance in the economy of the Federated Malay States. It is carried on by representatives of practically all nationalities, European and Asiatic, on properties ranging from the small holdings of one-half to five acres owned by Asiatics, to large estates of between five hundred and five thousand acres.

Agricultural crops can be classified in three categories. Those grown both on estates and on small holdings; those grown only on large properties; and those grown exclusively on small holdings by Asiatics. The first category includes the major permanent crops, rubber and coconuts, with which as catch-crops, coffee, bananas, pineapples or tapioca may be grown; it also includes tea, which is in its infancy as an estate crop in Malaya. The second category is confined to oil palms. The third comprises the important rice crop, minor food crops such as maize and ground-nuts, fruit, vegetables, arecanuts and tobacco.

A.—CROPS GROWN BY EUROPEANS AND ASIATICS.

Rubber.—The total area under rubber in the Federated Malay States at the end of the year 1932 is estimated to be 1,503,800 acres.

The distribution of areas is shown below:

	Holdings of 100 acres and over.		Holdings of under 100 acres.		Total.		Increase or decrease compared with 1931.
Perak	274,174	...	251,202	...	525,376	...	+ 2,074
Selangor	332,137	...	155,125	...	487,262	...	− 9,059
Negri Sembilan ...	274,106	...	81,299	...	355,405	...	+ 2,210
Pahang	59,784	...	75,973	...	135,757	...	+ 1,603
	940,201	...	563,599	...	1,503,800	...	− 3,172

The production of rubber in the year was 233,896 tons. Comparative figures for 1931 and 1932 are given below:

	Estates of 100 acres and over. TONS.		Estates of less than 100 acres. TONS.
1931	141,457	...	105,378
1932	140,525	...	93,371

It will be seen that the decrease in production is almost entirely due to the decline in the amount of rubber from the smaller estates, a decline of nearly 11.5 per cent.

The rubber produced was almost exclusively for export and the total local consumption in the whole of Malaya in 1932 was only 2,395 tons; this, however, was an increase as compared with 1,521 tons in 1931. In accordance with the decision reached in 1930 no fresh alienation of land for rubber planting has been made during the year, and in consequence any additional areas planted have been on land already alienated. Notwithstanding this fact, the area of new plantings in the Federated Malay States is estimated to be as follows:

	Estates of 100 acres and over.		Estates of under 100 acres.		Totals.
Perak	675	...	1,036	...	1,711
Selangor	194	...	271	...	465
Negri Sembilan ...	493	...	157	...	650
Pahang	259	...	411	...	670
	1,621	...	1,875	...	3,496

Rubber Area out of Tapping.—The continued low price has caused certain estates to cease tapping entirely, but usually it is considered more economical to tap than to put the estate on a care and maintenance basis. There has been a slight tendency only towards the abandonment of rubber properties, although with the continuation of existing conditions, it appears that a steadily increasing number of properties will be abandoned, and this will inevitably comprise the smaller estate units. Among peasant properties there has been a slight but noticeable tendency to cut out rubber and substitute other crops, particularly in areas where conditions are not very suitable for rubber growing. In the latter part of the year attempts were made to estimate the amount of rubber on holdings of under 100 acres in the Federated Malay States which were out of tapping. The result showed that of an estimated total of 510,000 acres of tappable rubber on small holdings approximately 79,000 acres were out of tapping. When rubber prices reached their highest in August and September, there was a corresponding increase in the area tapped, but minor fluctuations in price apparently had no effect on production.

Conditions of Estates.—Comparatively few estates have been able to carry on without financial loss despite the fact that remarkably low costs of production have been reached, in certain cases as low as from 4 to 5 cents per pound. The economies which led to this reduction must, however, in many cases be regarded as outside the range of practical politics under less stringent conditions. Great reductions have taken place in estate labour forces and the importation of labour from India for estate requirements has practically ceased.

Naturally during the depression the agricultural side of the industry has been almost entirely held up. Attention, however, has been paid to the possibility of decreasing the cost of production by modification of tapping systems and the introduction of factory improvements, and a certain amount of attention has been paid to the possibility of increased consumption of raw material.

Disease.—Mouldy rot disease has continued to occur throughout the whole of Malaya, especially during the wet season. The low price of rubber precludes small holders from applying remedial methods and thus control of the disease is rendered particularly difficult. In fact it is to be feared that strains of the disease possessing augmented virulence are making their appearance.

Small Holdings.—The investigation into the questions of tapping practice on small holdings, bark reserves and rate of bark removal and bark renewal are nearly completed and it is expected that the final analysis of figures will be completed in time for publication of the information obtained during the first half of 1933. Data so far collected justifies the statement that the rate of bark renewal on the average small holdings in Malaya considerably exceeds the rate of excision.

There has been no general tendency to replace rubber by other crops, but a number of instances exist where a small holder has cut out some of his poorest rubber with the object of utilising the land for growing sufficient food-stuffs for his own needs.

General.—During the year much attention has been paid to the question of finding new and extended uses for rubber, and attention has been directed to the properties of raw rubber from a manufacturer's point of view and efforts to correlate them with production on estates. Particular attention has been directed to the possibility of rubber road making both in the East and in Europe. Trial stretches of rubber road treated with various forms of rubber mix have been laid down under observation.

Coconuts and Coconut Products.—Coconuts are widely distributed over Malaya. Perak and Selangor possess large estates devoted to this crop and there are well-defined blocks of small holdings in the coastal districts of these two States, but throughout Malaya there is hardly a commoner sight than the few palms planted around the homesteads of Malays and also of other Asiatic inhabitants, and this makes even a rough estimate of the total production of coconuts in the Federated Malay States very difficult. Nuts produced in the inland districts are all consumed fresh.

A close census of coconut areas was made in 1930 and no further census has been deemed necessary in subsequent years. However, certain new areas have been opened up recently in Selangor and the estimated acreage is now as follows:

	Areas.
Perak	108,940
Selangor	110,584
Negri Sembilan	5,966
Pahang	14,530
	240,020

Market conditions for coconut products continued to be adversely affected by the prevailing economic situation. Estimate crops are used almost entirely for the production of copra (although a feature of recent years has been the increased local production and export of coconut oil).

No organisation exists for estimating the total quantity of copra produced in Malaya: imports from the Netherlands East Indies are considerable and are used both in the production in Malaya of coconut oil and for grading with Malayan produce for re-export. Net exports of copra from the Federated Malay States were 74,085 tons, an increase of a little less than 9,000 tons over the exports for 1931.

Of considerable importance in the coconut industry is the drainage problem owing to the heavy clay soils and the fact that most of the coconut lands are low-lying. The problem has received considerable attention in the past year, so far as estates are concerned, as likewise has the question of manuring, and trials have been conducted in conjunction with the Department of Agriculture.

Great interest has been manifested in the possibilities inherent in the improvement of the type of copra produced, and considerable progress has also to be recorded in the matter of copra production by small growers. In the past the practice was for small growers to sell nuts to middlemen copra makers and dealers, but local preparation of their own copra is now well established throughout the whole of the Selangor coast coconut areas. This is largely a response to the propaganda carried out by the Department of Agriculture and extensive work has led to rapid improvement in kiln construction and in the production of vastly superior copra both on estates and small holdings. It is clear that the Ceylon standard of copra is by no means unattainable in Malaya.

So far these efforts have been without perceptible effect on the market price except in the case of small holder's produce where the local prices for both nuts and copra have been subsequently increased as the result of the introduction of improvements. In the case of estate copra, however, it has been found that labour expended on the production of a better quality product is more than repaid by the diminished losses in transit, which occur. In the case of the copra produced by the small holders the position still needs very careful attention in order to maintain the high quality of the copra that has recently begun to be turned out in certain areas.

Pests and diseases of coconuts have been kept well in hand, although the caterpillar of the zygaenid moth caused damage of varying extent to palms in Krian and Kinta and in Selangor.

Pineapples.—The area planted with pineapples continues to increase. Four thousand nine hundred and ten acres in 1930 increased to 6,292 in 1931, of which 5,207 acres were in Selangor. In 1932 Selangor has increased the acreage by a further 1,732 acres and the present area under cultivation is the largest ever recorded.

There are now two pineapple canning factories in Selangor (the only ones in the Federated Malay States) both owned and operated by Chinese. One of these has recently introduced peeling machinery, and working conditions in the factories have generally improved in the past few years.

The average price of canned pineapples, however, shows a slight decline over prices for 1931 and as the quotations at the end of the year were less than those in the corresponding months of the previous year it is likely that the average price for 1933 will be still lower than those of 1932. The averages for 1932 per case of 48 tins (72 lbs. of fruit) were:

Cubes	$3.34
Sliced flat	3.27
Sliced tall	3.48

Efforts to establish the cultivation of pineapples as a main crop and to improve the conditions of the pineapple industry generally have been continued. Investigations into the cultivation and manuring of pineapples have been carried on by the Department of Agriculture.

Coffee.—Singapore prices of coffee have shown but small fluctuation throughout the year and the Singapore trade in coffee has been maintained, imports amounting to nearly 5,000 tons and exports to over 2,000 tons. It would seem therefore that if Malaya can produce the right kind of coffee there is at hand an export trade in this product.

Most of the coffee grown in the Federated Malay States occurs in Selangor where there are 6,026 acres planted, but the greater attention that has been given to the possibility of satisfying local demand from local supplies has increased the interest evinced in the possibility of cultivating Arabian coffee in the Highlands of Malaya. Small experiments with Arabian coffee have been conducted by the Department of Agriculture for some years past and reports on samples submitted to London have been favourably reported on.

Several brands of locally grown and prepared coffee are now found on the retail market at prices ranging from 30 to 70 cents per pound. This does not, however, appear to have much influence on the quantity imported into Malaya.

Pests and diseases have not been unduly prevalent during the year.

Tea.—Interest in this crop has continued to increase and at Cameron Highlands plantations have been opened by a number of individuals. Considerable interest centres on the quality of the tea likely to be produced in this region and during the year the experimental tea factory at the Experiment Station, Cameron Highlands, was completed and started work. Samples of tea from this factory prepared under varying conditions and at different seasons of the year are now being submitted regularly for valuation and report. The results will be published as soon as a sufficiently representative average has been received. There are 649 acres of upland tea grown at an elevation of over 4,000 feet at the Highlands.

Tea sold locally, at between 35 to 50 cents per pound according to grade, is at present entirely lowland tea. It is mostly black tea but it appears that considerable scope may exist for the preparation of green tea for consumption by Chinese Green tea constitutes a considerable proportion of the total imports, while local growers are all Chinese small holders, mostly in Selangor.

Diseases of tea in the year comprised certain cases of root diseases in new clearings. White ants have also been in evidence in certain parts and one plantation in the Highlands reported mosquito blight.

B.—Crops Grown Entirely on Large Estates.

Oil Palms.—The total area planted with oil palm at the end of 1932 was returned as follows:

	Acres.
Selangor	17,372
Perak	13,315
Negri Sembilan	1,173
Pahang	788
	32,648

This represents an increase of some 400 or 500 acres in the year, almost entirely confined to Perak and Negri Sembilan.

All oil and kernels produced are exported with the exception of a small demand for oil for the local manufacture of soap. Production and export have both increased during the year by half as much again as in 1931 but prices for palm oil have continued to decline, the average for 1932 being £17.16.9 per ton as compared with £18.8.3 for the previous year.

Questions that have been prominent during the year are those connected with soil conservation methods, manuring, pollination, and systems of manufacture. The Government Experimental Station at Serdang has carried out manurial experiments and continued comparative trials of the two systems of manufacture practised—centrifuge and hydraulic press—but results now definitely indicate there is little to choose between the two methods of extraction from the point of view of efficiency.

Bulk shipment of palm oil has made headway. The Federated Malay States Railways have in operation a scheme for transport in suitable tank wagons and the Singapore Harbour Board has completed an installation of three 500-ton tanks at Singapore with necessary pumping arrangements to receive oil from sea or rail. Another organisation is designed to ship oil in bulk direct from the Selangor coast.

Stem rot disease continued to give trouble but methods of treatment are now well known and are being applied successfully.

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—The estimated area of rice land and the yield of *padi* to the nearest 1,000 gantangs (686 gantangs of *padi* taken to be equivalent to one ton of rice) for the season 1931-32 were as follows:

	Wet.		Dry.		Total.	
	Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
Perak ...	88,160	24,341,000	14,510	1,725,000	102,670	26,066,000
Selangor ...	20,840	3,264,000	3,260	264,000	24,100	3,528,000
N. Sembilan	32,860	9,574,000	370	51,000	33,230	9,625,000
Pahang ...	32,780	5,658,000	1,800	183,000	34,580	5,841,000
Total ...	174,640	43,837,000	19,940	2,223,000	194,580	45,060,000

In respect of both acreage planted and crop harvested, the figures for the season just concluded constitute a record. About 32,000 tons of rice were produced more than in 1931 and 36,000 tons more than in 1921 (the two previous record years, in both of which the uneconomic price of rubber led the Malay population to return to rice production).

Favourable weather for *padi* cultivation in most areas was largely responsible for an increase in average yield per acre of wet *padi* from 237 gantangs in 1931 to 245 gantangs in 1932, but the actual area planted was increased by 15,650 acres and produced a crop of over seven million gantangs more than 1931. In Krian, where over 50,000 acres were under *padi*, planting was late but the crop was reaped with but small loss thanks to the comparatively low rainfall in late March and early April. Floods at the end of 1931 caused much loss of crop in the Kuala Kangsar and Lower Perak districts and in certain areas in the valley of the Pahang river, but where flood damage was not sustained good crops were harvested in both Perak and Pahang. Recently opened areas in Kuala Selangor suffered very severely from rat damage.

The crop season for most of Malaya is from July to mid-January or February, but local variations occur and a good crop was reaped in Pahang towards the end of 1932 for the 1932-1933 season. In Selangor double cropping has been practised as a method of transition to a new season from the faulty planting practice noticed in last year's report.

Experimental work during the year has comprised work on breeding and trying out new strains, on cultivation and manurial experiments, and investigations on *padi* soils. Further work has been done with regard to the question of stem borers but there are still many complicating factors either not yet ascertained or as yet imperfectly understood.

No extensive damage by rats occurred except in the newly opened areas at Panchang Pedena and Tanjong Karang in Selangor where tree stump and the surrounding jungle provided harbourage and at the same time made control particularly difficult. In Krian the systematic control measures referred to in last year's report continued to function satisfactorily. Present conditions would seem to have induced the cultivator to regard his *padi* crop as of greater importance than in more prosperous times and greater attention to control measures has rendered *padi* particularly free from rat damage.

Tobacco.—Considerable attention has been paid to this crop by the Department of Agriculture during the year and numerous experiments have been carried out. Two lines of development appear to be indicated, the growth of filler tobacco for cheroots and the production of bright leaf for cigarettes, and experimental work on flue-curing is at present in progress.

Local production has greatly increased in popularity owing to the increase in import duty and the non-imposition of an excise duty. A committee was appointed by His Excellency the High Commissioner recently to consider the possible effect of tobacco cultivation on revenue, but it had not presented its report at the end of the year. It is difficult to estimate the area under tobacco owing to its being grown in scattered plots and with but little regard to season, but it is probably safe to assume that the total area annually planted is twice the area found at any one time.

Up to the present locally grown tobacco has consisted of poor quality leaf which has been used only for native consumption.

Selangor had an area of 308 acres under tobacco at the end of 1932, as compared with 57 acres at the end of 1931; and the crop received even greater attention in the earlier part of the year. Chinese market gardeners in South Perak grow tobacco as a rotation crop and at the end of the year there were some 850 acres under the crop in that State. Prices ranged between $25 and $33 per pikul for cured leaf. In Selama, however, where the crop was formerly very popular, cultivation was practically given up during the latter part of the year.

Minor Food Crops.—Much greater attention is now being paid to the cultivation of minor food crops such as tapioca, ground-nuts and vegetables, and there appear to be considerable possibilities for extension of cultivation to meet local requirements. The Department of Agriculture during the year completed a series of studies on tapioca cultivation and the conclusion is that this crop is no more exhausting to the soil than any other provided that adequate attention is paid to manuring and to soil conservation. There are three tapioca factories in Negri Sembilan.

There are 644 acres of ground-nuts, mainly in Perak and Selangor, and trials have been carried out by the Department of Agriculture and distribution of planting material has been made.

There has been also a considerable increase in vegetable growing of recent years but imports are still very considerable. Vegetable growing is largely in Chinese hands and efforts are being made with a view to possible improvement of the conditions under which the vegetables are grown. A number of Europeans have now taken up land in the Highlands with a view to establishing a trade in fresh vegetables for the plains.

Increasing attention has been paid to fruit cultivation by small holders and there are now 2,004 acres in the Jelebu district of Negri Sembilan planted with bananas as a sole crop.

AGRICULTURAL ORGANISATION IN THE FEDERATED MALAY STATES.

The reorganisation of the Department of Agriculture was brought into being at the commencement of the year.

Under the scheme the department is divided into four branches, viz.:

(*a*) The Research Branch under the Chief Research Officer comprising six research divisions each under a divisional chief.

(*b*) The Field Branch comprising the organisation in the various States with an agricultural officer in charge of each section responsible to the Chief Field Officer at Head-quarters.

(*c*) The Agricultural Education Branch comprising the School of Agriculture under the Vice-Principal.

(*d*) The Economics and Publication Branch under the charge of the Agricultural Economist.

In connection with the Research Branch, work has been maintained in the various scientific divisions, and the operations at the Government Experimental Plantation, Serdang, the Coconut Experimental Station, Klang, and the Rice Breeding Station, Titi Serong, have been continued. The small stock farm at Serdang and the dairy and vegetable farm at Fraser's Hill are also maintained by the Research Branch.

The Field Branch of the department has now nine Demonstration Stations in various parts of the country: two in Perak, one in Selangor, two in Negri Sembilan and four in Pahang. These stations provide demonstrations and supply planting materials of good quality.

School gardens, of which there are 394 in the Federation, provide another means of instruction and propaganda. Regular periodic visits are made and where the movement has made sufficient progress prize competitions are held.

The Rural Lecture Caravan jointly maintained by the Departments of Agriculture and Co-operation and the Rubber Research Institute, has made tours during the year in all four States and definite proof of results accruing from the caravan propaganda are now forthcoming—the most striking instance being in the matter of copra production by small holders.

The Malayan Agri-Horticultural Association held its ninth exhibition in Kuala Lumpur at the end of July and district shows were held in certain parts of the country, though they had been stopped in 1931 on grounds of economy.

The School of Agriculture at Serdang, only opened as recently as May, 1931, passed through a somewhat critical year, but it is during periods of acute depression such as the present that the school can exert its greatest influence, and the potential value of the school was fully admitted in the report of the Federated Malay States Retrenchment Commission. There is accommodation for 80 students but the average attendance throughout the year has only been about 35. This was in part due to the suspension of recruitment for Agricultural students and pupils both in the Federated Malay States and in the Straits Settlements. There was held a special course of instruction for Assistant Penghulus attended by 16 officers at the end of August and beginning of September. A film of some 800 feet depicting the work of the school and the students has been completed and will be included in the programmes of the Rural Lecture Caravan.

The Agricultural Department also issues various publications, monthly numbers of the *Malayan Agricultural Journal* in English with quarterly journals in Malay and in Chinese. There are likewise special Bulletins issued from time to time (seven were published in the year) and pamphlets in English, Malay, Chinese or Tamil.

LIVE STOCK.

The dairy operated by the Department of Agriculture at Fraser's Hill has begun to export small amounts of milk to neighbouring towns on the plains but its most useful purpose is as a source of supply of young stock to other parts of the country. The Serdang Dairy Farm, however, now supplies certain Kuala Lumpur hospitals with milk and has numerous private customers.

Investigations have been made as to the possibility of establishing a regular grazing rotation for cattle with rice on sawahs. Work has been undertaken on the analysis of local fodders and every effort is being made to improve the live stock position in this country.

Great scope exists for the improvement of poultry raising throughout the country, especially in the Malay kampongs where the birds are given the minimum of care and attention. Steps have now been taken to establish small poultry runs at several of the Agricultural Stations with the object of distributing birds of improved strains for crossing with kampong poultry.

The experimental stock farm for improving the breed of buffaloes in Pahang, the establishment of which was foreshadowed in last year's report, was opened during the year on a site of 200 acres. Experiments in feeding and pasturage were commenced and observations on breeding and various points of genetics have also made progress.

Attempts were also made to improve the local breed of pigs which suffers partly from in-breeding and partly from a haphazard system of feeding. Little progress was made, however, owing to the inability of most of the breeders to afford more suitable foods.

A census of live stock was taken during the year and the following statement has been compiled from returns obtained from various sources and from actual counts carried out by officers of the Veterinary Department wherever possible. Great difficulty was experienced in collecting accurate figures, especially in the case of goats, sheep and dogs which are frequently kept in dwelling-houses:

	Cattle.	Buffaloes.	Sheep and goats.	Pigs.	Dogs.	Horses.
Perak	20,483	16,388	35,211	49,907	11,506	160
Selangor	13,829	2,226	20,823	53,113	9,029	146
Negri Sembilan ...	6,949	12,501	20,295	22,398	3,922	23
Pahang	4,277	16,064	13,977	13,918	2,050	40
Totals, 1932 ...	45,538	47,179	90,306	139,336	26,507	369
Approx. value in $ ...	2,276,900	2,830,740	1,038,519	2,508,048	—	184,500

The total valuation of $8,838,707 is arrived at by allowing $50 per head for cattle, $60 per head for buffalo, $18 per head for pig, $11.50 per head for sheep or goat and $500 per head for horse.

All animals entering the Federated Malay States from sources outside Malaya are liable to undergo quarantine at the place of entry, a measure which is enforced as a matter of routine in the case of bovines, special provision being made for those intended for immediate conversion into meat.

The imports of cattle and buffaloes show an increase for the year, the figures being 901 and 1,572, respectively, as compared with 360 and 1,258 in 1931. As usual the export of animals and animal products was negligible, being represented mostly by hides and skins.

The following return shows the imports into Malaya of meat and animal products for the years 1931 and 1932:

		1931.		1932.	
Article.	**How counted.**	**Quantity.**	**Value in $.**	**Quantity.**	**Value in $.**
Cattle and buffaloes	Nos.	14,896	1,147,629	17,024	889,688
Swine	"	147,791	2,743,887	168,577	2,986,929
Sheep and goats	"	50,285	594,217	68,225	542,620
Milk (condensed, etc.)	Cases	952,260	9,360,913	847,669	7,904,587
Butter, tinned	Cwts.	9,839	534,460	9,066	445,398
Ghee	Tons	1,061	1,065,009	736	661,040
Lard	"	883	269,155	529	173,627
Eggs, fresh and salted	Hundreds	403,931	748,445	190,538	335,522

The above figures clearly indicate that Malaya is dependent on outside sources for its supply of meat, milk and other animal products.

FORESTS.

A large part of the land surface of the Federated Malay States is still covered with natural forest, which constitutes an economic asset of considerable potential value. It has been the policy of the Government to set aside an adequate proportion of the forest area for permanent timber production, and in the forest reserves, as they are called, cutting is strictly regulated in accordance with conservative principles. The working of the State land forests, which are destined ultimately for alienation, is subject to less drastic restrictions, but the grant of large concessions for destructive exploitation of forests is contrary to present policy except in cases in which a demand exists for the land denuded for other productive purposes. Concessions on a limited scale might be considered but present economic conditions are not exactly favourable for enterprise in this field.

The replacement of the natural forest growth in the reserves, as it is removed by timber cutters, by new and more valuable forest crops under regulated management, is a Government enterprise and constitutes the chief business of the Forest Department, being carried on by the agency of a trained staff consisting mainly of Malays. All timber is sold standing, and the business of its conversion and extraction is carried on almost entirely by Chinese contractors and Chinese labour. The same applies generally to the collection of minor forest produce. There are small sawmill industries in Perak and Pahang, and attempts were made during the year to turn out material for the export market in certain mills. A large part of the output of timber is still converted by Chinese hand-sawyers and this method, though primitive, is likely to be useful for a long time to come in the process of converting natural jungle to regulated forest crops, which has to be carried out gradually and does not admit of intensive working. There is even some hope that a market may be found for certain classes of hand-sawn material in the United Kingdom, and trial consignments have been arranged.

The Federated Malay States as a whole are self-supporting in the matter of timber supplies and were, on balance, exporters of timber and firewood to the value of $707,769 in 1932. With the exception of Selangor, in which State, owing to its earlier development, the accessible forests have been somewhat depleted, all the States are self-sufficient as regards timber supply and should be capable of providing a surplus for export. The high cost of internal and coastal transport is at present a factor limiting the extent to which timber from the Federated Malay States can compete in centres of consumption such as Singapore and Penang, but as the supplies of cheap wood from Sumatra and Siam become less in consequence of forest depletion—and there are already some signs that this process is in operation—the tendency will be to draw more and more on the large forest areas remaining more or less intact in the interior of the Peninsula.

Progress with the formation of forest reserves proceeded normally and the year closed with 7,065 square miles reserved and 377 square miles proposed for reservation. Little further reservation is required in the Western States, but the area of reserves in Pahang is still low in relation to the total extent of that State.

The financial results of the year show still further deterioration, and revenue shrunk to $648,336 as compared with $1,165,742 in 1931 Expenditure was reduced from $1,289,801 in 1931 to $863,365—a decrease of 31 per cent.—and the deficit amounted to $215,029. Some indications of improvement appeared during the last quarter of the year.

The outturn of timber, firewood and charcoal during the year amounted to 4,561,237, 7,348,287 and 763,863 cubic feet solid respectively representing decreases of 1,450,344, 3,505,137 and 71,250. It is noteworthy that the decrease in the output of timber and fuel as compared with 1930 reaches the startling figure of 57 per cent. The specific effect of the Tin Restriction Scheme seems to be mainly accountable for the drop, and other factors of the slump are only a secondary cause. Twenty-nine per cent. of the output of timber and 55 per cent. of the output of firewood were derived from forest reserves, the combined percentage for timber and fuel being 46. It is interesting to compare the latter figure with the same percentage in 1916 which was 17, the increase indicating the progressive exhaustion of State land resources. If Pahang, which still derives 92 per cent. of her supplies from State land, were eliminated, the percentage derived from reserves in the Western States would show much higher than the average for the Federation. As regards minor produce, the outturn of *jelutong* showed little change but the revenue decreased owing to a fall in price, royalty being levied *ad valorem* on this product. There was further improvement in the output of inferior damars.

The possibilities of developing an export trade in Malayan timbers with the United Kingdom were the subject of close study both in Malaya and in England, and several trial consignments have been sent home and have met with a favourable reception. Numerous enquiries and orders have been received and there is no doubt as to there being an outlet for all the timber of certain select classes that can be produced. Sentiment in the trade is definitely favourable to the use of Empire timbers and on the marketing side prospects are bright. The difficulties are mainly with regard to production and transport. Seasoning timber for this market is a rather lengthy business and the local millowners, being accustomed to dispose of their output unseasoned, are hard put to it for the finance necessary for the carrying of stocks during the period of drying and shipment. The limited range of timber acceptable raises a problem in the disposal of the large proportion of the output assignable to the lower grades in local and adjacent markets which are already over-supplied. High ocean freights reduce the margin of profit, and the high cost of internal transport renders it difficult for mills near the shipping points to obtain raw material at reasonable rates, while mills in the interior find the cost of transport on manufactured material to the ports prohibitive.

The antiquated equipment of the mills has not proved an insuperable obstacle to production and there have been no complaints of any importance on the ground of bad manufacture in respect of any of the trial shipments made, though in mills embarking on production for export the close personal supervision of the Forest Engineer is always necessary at the outset.

Progress has been made towards surmounting the difficulties described but it is necessarily slow. As a result of contacts made with leading timber firms, the range of material acceptable has been considerably enlarged. A sub-committee of the Advisory Committee on Timbers at the Imperial Institute has laid down tentative grading rules for Empire hardwoods which will simplify dealings between producer and consumer to the particular advantage of the former. It is being sought to ease the financial difficulties of the local mills by arranging for payment on consignments to be made at the time of shipment. Intensive investigations by the Forest Engineer into the problems of cutting and conditioning timber for shipment have enabled the technique to be standardized for the principal classes of timber in demand, and the reliability of the technique adopted has been proved by the satisfactory condition of the trial shipments on arrival. Apart from the cost of the expert services of the Forest Engineer the expenditure involved has been negligible as the trial consignments have been shipped against definite orders and paid for at fair rates.

Passing to the subject of timber extraction, the remarkable success of the Parit tramway mentioned in the report of last year has led to its extension and to the initiation of a similar project in Kroh reserve, and other projects on similar lines are in contemplation. Progress was also made with the cleaning of natural waterways to enable them to be used for the conveyance of timber, and the cost of such work proved much lower than had been anticipated. The opening up of such waterways is very important for the development of timber production as they provide the most economical means of transport for log supplies, and it is hoped that this requirement will be taken into consideration in framing irrigation and drainage schemes.

The reorganized Timber Purchase Section functioned smoothly during the year and the total value of the material purchased for the Federated Malay States Railways, Government departments and others was $254,786.

Research on forest products, botany, wood technology and silviculture was carried on at the Forest Research Institute, and routine testing of timber continued at the Timber Research Laboratory, where a new programme of experiments in the impregnation of sleepers, electric standard poles and pit props by the "open tank" method was also put into operation. A forest record summarizing the work of the Forest Chemist on Malayan damars was published towards the close of the year. The educational work of the Forest Research Institute continued on normal lines.

FISHERIES.

The total weight of wet fish landed in 1932 in the Federated Malay States amounted to 43,966,182 katties or 26,170 tons approximately. Estimated at 5 cents per kati, the value of fish landed in the Federated Malay States amounted to $2,198,309.

Selangor landed 24,350,348 katties, Perak 9,566,789 katties, Pahang 9,535,867 katties and Negri Sembilan 513,178 katties.

All these fish were caught by native methods, either in traps, drift nets, seine nets or by hook and line, and were mostly salted and dried in the sun for local consumption. A considerable proportion was sold fresh and was distributed all over Malaya packed in ice.

The total weight of wet fish landed was an increase of 5,650 tons over 1931. The increase was largely due to an improvement in the returns from the fishermen as a result of closer supervision.

The total full time fishermen employed amounted to 8,093 of whom 3,834 were Malays and 4,257 Chinese. A considerable number of Malays who were only partially employed in fishing are not included in these figures.

Revenue from fishing licences amounted to $10,284 as against $12,855 in 1931; and from boat licences to $2,516 as against $3,147 in 1931. The changed industrial conditions were responsible for the decrease.

Fishing was normal apart from the reports of local fluctuations, although the price of fish obtained by the fishermen was still lower than the 1931 level.

MANUFACTURES.

There are but few manufacturing concerns in the Federated Malay States. They include four aerated water factories, one match factory, five distilleries, one plywood factory, two pineapple canning factories, one cement works, and a few tile and brick factories. One match factory was closed during the year.

CHAPTER VII.

Commerce.

The aggregate value of trade for the year 1932 was $158,984,582, a decrease of $72,393,812 or 32 per cent. as compared with the year of 1931.

The decrease may be said to be due entirely to

(*a*) the fall in the price of rubber;

(*b*) the restricted output and export of tin; and

(*c*) the curtailment in purchasing power which results from (*a*) and (*b*).

The average price of rubber for the year was 7.07 cents per pound as against 9.9 cents in 1931, a fall of nearly 25 per cent. The highest price was 10⅛ cents per pound at the beginning of the year. On 10th June the price dropped to 5 cents.

The average price of standard tin for the year was $69.73 per pikul as against $60.22 per pikul in 1931. The lowest price was $52.87½ on 14th April and the highest was $81.75 per pikul on 9th September.

The average price of copra for the year was $5.76 per pikul as against $5.11 per pikul in 1931. The highest price during the year was $7 per pikul on 26th February, while on 17th June the price fell to $5.10 per pikul.

The distribution of trade per head of the population was $90 as compared with $134 in 1931.

The total value of imports and exports (including re-exports, bullion and parcels post) for the last six years is as follows:

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1927	176,161,194	339,925,603	163,764,409
1928	191,473,471	278,523,482	87,050,011
1929	201,393,405	349,012,595	147,619,190
1930	168,020,418	213,652,044	45,631,626
1931	106,201,211	125,177,183	18,975,972
1932	71,133,301	87,851,281	16,717,980

The percentage distribution of the import, export, and re-export trade of the Federated Malay States for the last three years is as follows :

IMPORTS.

Countries from which imported.	1930.	1931.	1932.
Singapore	35.25	34.72	34.12
Penang	17.70	17.27	19.16
Malacca	2.33	2.79	2.78
Unfederated Malay States	1.03	1.58	2.74
United Kingdom	16.70	14.37	12.06
British Possessions	7.14	7.88	8.53
Continent of Europe	3.90	4.79	3.09
Other Foreign Countries	15.95	16.60	17.52
	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries from which exported.	1930.	1931.	1932.
Singapore	23.29	23.18	26.50
Penang	33.19	38.44	32.19
Malacca	2.97	3.79	4.16
Unfederated Malay States	.52	.56	.75
United Kingdom	13.79	9.14	9.26
British Possessions	.64	.88	1.14
United States of America	19.79	18.86	16.15
Other Foreign Countries	5.81	5.15	9.85
	100.00	100.00	100.00

The trade of the Federated Malay States falls into two categories, direct with foreign countries via Port Swettenham and Straits Settlements ports, and with merchants in the Straits Settlements. This trade is principally an export trade in raw materials—agricultural, forest, marine and mineral produce—in exchange for imports of food, tobacco, fuel oils, clothing and machinery. The principal export trade was with the United States of America and the United Kingdom; the principal import trade being with the United Kingdom, British India, Burma, the Continent of Europe, Netherlands India, Siam and the United States of America.

The foreign trade of Malaya as a whole amounted to $747 millions in 1932 as compared with $887 millions in 1931, a decline of 16 per cent. Of this, 15 per cent. was with the

United Kingdom, 17 per cent. with British possessions and 68 per cent. with foreign countries, an increase of trade with the United Kingdom and British possessions amounting to 4 per cent. of the total as compared with 1931. The trend of trade as measured in values continued, as in the past two years, to decline and few signs of improvement, if any, were evident at the close of the year. The two principal exports, rubber and tin, declined in value by $40,536,947 and $27,790,782, respectively, as compared with 1931. Exports of bullion and coin were notably high, amounting to $43 millions, or 11.6 per cent. of the total export trade, as compared with $28 millions in 1931, most of which was to the United Kingdom and Sumatra.

CHAPTER VIII.

Wages and Cost of Living.

The prevalence of what amounted to almost stagnant conditions in commerce and industry led to a reduction in general wage rates during the year. Wholesale commodity prices declined by 18 per cent., retail food prices by about 11 per cent. and the general cost of living by 13 per cent. for Asiatics, 11 per cent. for Eurasians and 8 per cent. for Europeans, based on prices in Singapore. House rents as indicated by municipal assessments declined by 20 per cent. in Kuala Lumpur as compared with 1931.

The index numbers of the general cost of living, including house rents, at the end of 1932 as compared with 1914 and 1931, were as follows:

Standard.	1914.	1931.	1932.	+ or − in 1932 : %
Asiatic	100	125.0	108.6	− 13.1
European	100	139.9	129.2	− 7.6

The bulk of the labour in the Federated Malay States is employed on rubber estates and tin mines. The labour on the former is recruited mainly from Southern India while that on the latter is mainly Chinese.

In October, 1928, as the result of an enquiry in the coastal districts of Selangor, the following standard rates of wages were fixed for South Indian labourers employed in those districts:

An adult male labourer, 50 cents a day;

An adult female labourer, 40 cents a day.

The rates were based on a standard budget, including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. Standard rates for the inland districts of Pahang were fixed at 58 cents a day for each adult male and 46 cents a day for each adult female labourer. A subsequent enquiry, prompted by the fall in commodity prices and the inability of employers to pay these rates, was held in the middle of 1930 and the standard rates were then reduced to the following :

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult male;
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult male;
37 ,, ,, ,, female.

Standard rates are the minima paid in Government departments. Indentured Javanese, of whom, as a result of the passing of the Netherlands Indian Labourers' Protection Enactment No. 14 of 1932, there will very shortly be none left, are paid at the rate of 50 cents a day for men and 40 cents a day for women while free Javanese earn about the same as South Indian labourers.

Average commodity prices, as shown in the monthly Malayan trade returns, declined by 17 per cent. as compared with 1931, but it is unlikely that this affected the average labourer's budget in which the cost of rice and other foods is the predominating factor. At the end of 1931 it was estimated that the cost of living had declined by about 30 per cent. from October, 1928. At the time of the standard wage enquiry in October, 1928, the current price of rice was 48 cents a gantang. It was about 23-26 cents a gantang in December, 1931, and has been about 22 cents a gantang since the middle of 1932.

There was a marked tendency during the year to reduce the gross earnings of South Indian labourers. This was effected in non-key areas (i.e., areas in which standard rates had not been prescribed) by reducing wage-rates and in Key areas by demanding a full nine hour day for a full standard day's wage or, alternatively, acceptance of payment in proportion to the number of hours worked. To meet the new situation, to ensure frugal comfort to all labourers and to keep conditions level in both Key and non-key areas, a scheme was evolved, with the unanimous approval of the Planters' Association of Malaya, whereby a monthly sum representing a decent subsistence wage for the worker was fixed by the Indian Immigration Committee and all labourers on properties where this wage was found not to be earned were mustered and informed that if they desired to return to India they would be repatriated. On the whole the scheme is considered to have achieved the purpose for which it was intended.

In connection with enquiries on a few estates where earnings were found to be unsatisfactory the labourers on interrogation declared that they preferred to remain on their places of employment as they said they could supplement their earnings sufficiently in various ways, e.g., by fishing, hunting, the collection and sale of firewood, and the growing of vegetables. Their reluctance to avail themselves of the facilities for free repatriation is partly due to the depressed conditions prevailing in South India.

The wages of Chinese labourers on rubber estates were the same as for Southern Indians. Of the labour engaged in mines approximately 20 per cent. is on contract (chiefly engaged in lode mining) and the remainder are in receipt of wages.

CHAPTER IX.

Education.

(*a*) *General.*—The expenditure upon education (including $100,249 spent by the Public Works Department on the building and upkeep of schools) was $3,305,867. Of this sum, $559,732 was paid in grants to English aided schools, $62,710 in grants to Tamil vernacular schools and $81,164 in grants to Chinese vernacular schools. The total revenue, derived mainly from school fees, collected by the department was $250,194. In addition the education rate realised $237,602.

At the end of the year the European male officers of the department on the Federated Malay States Establishment numbered 47 and the female 11. This figure included administrative and teaching staff and miscellaneous appointments.

Educational facilities are provided in the Federated Malay States in English and in various vernacular languages—Malay, Chinese and Tamil.

Schools are either Government, aided by Government, or private.

All schools, i.e., places where fifteen or more persons are habitually taught in one or more classes (except where the teaching is of a purely religious character), and all supervisors, committees of management and teachers of schools must be registered in accordance with the Registration of Schools Enactment, 1927.

(*b*) *English Education.*—The English schools are schools in which English is the medium of instruction. Few of the pupils are English speaking when they join, and the lowest class may be composed of children speaking between them some seven or eight different languages or dialects, those speaking one language or dialect being generally quite unable to understand those speaking any of the others. In the circumstances the use of the "Direct Method" of teaching English is practically obligatory. Children are accepted into the lowest class at the age of six or seven and they are given an education which ends as a rule with their presentation at the Cambridge School Certificate Examination, though one or two stay on and prepare for the London Matriculation Examination.

The fees are $30 (£3 10*s.*) a year for the first six years (i.e., for the years spent in the Primary Division of the school) and $48 (£5 12*s.*) a year for the remaining period. Attendance is not compulsory.

In 1932 there were 24 Government English schools for boys, and 12 grant-in-aid English schools for boys and 13 for girls. The total average enrolment was 7,158, 5,788 and 4,530 respectively.

Of the 17,476 pupils in English schools, 3,787 or 21.67 per cent. of the pupils were enjoying free education. The details of the nationalities so benefited were 311 Europeans and Eurasians, 2,352 Malays, 807 Chinese, 294 Indians and 23 others.

The Malay College, Kuala Kangsar, trains probationers for the Malay Administrative Service and for various Government departments. At the end of the year there were 105 students, all boarders. The general health of the boys was good. The average strength of the Cadet Corps was 4 officers and 53 other ranks. The corps is organised as a platoon and a band. The average strength of the scouts was 3 officers, 42 scouts and 16 tenderfeet. Football, cricket and hockey are compulsory and tennis and fives are played regularly. The swimming pool is very popular. The cost of running the College was $68,630. For the first time in the history of the school fees were paid by the boys from the Federated Malay States.

The aided English schools are managed by various Missionary bodies—the Christian Brothers, the Methodist Episcopal Mission, the Church of England, the Plymouth Brethren and the Sisters of the Holy Infant Jesus.

The Government pays to such school monthly grants equal to the difference between their revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment, and salaries in respect of missionary teachers at the rate of £420 per annum for a male and £280 per annum for a female missionary. Capital grants amounting to half the cost of approved new buildings may also be paid by the Government under certain conditions.

There is no central college for the training of teachers for English schools. Such training is supplied at normal classes held at certain centres in all States except Pahang (where correspondence classes take their place). An examination has to be passed each year, those for the first and third years being conducted by a central authority and that for the second year by the local Inspector of Schools and Instructors. Student teachers who pass the third year examination become "Trained Teachers".

At the annual examinations held in March, 1932, 97 (61 men and 36 women) passed; 22 men and 11 women completed the three-year course and became trained teachers. No new first-year classes were started anywhere for the 1932-1933 session.

Certain selected students, student teachers or teachers are given three-year scholarships to Raffles College, there to undergo a course of practically university standard to fit them for the teaching of subjects in the secondary classes of the English schools. They are allowed to specialise in certain branches. In 1932 there were 26 of these College students, 14 from Perak, 6 from Selangor, 4 from Negri Sembilan and 2 from Pahang.

Technical education.

(*c*) *Vocational and Industrial Education.*—The Government Technical School, Kuala Lumpur, provides courses of training for students from the Public Works, Railways, Electrical and Posts and Telegraphs Departments, and gives accommodation also to a class conducted by the Survey Department for its own untrained subordinates. At the end of the year there were 94 students under instruction at this school, 13 of whom were from the Colony and the Unfederated Malay States.

Evening classes were held in Kuala Lumpur. The curriculum there comprised English, practical mathematics, electrical engineering, workshops mechanics, machine drawing, coach building, locomotive engineering and heat engine. For financial reasons evening classes in other centres were dropped.

Industrial education.

At the end of the year the Federal Trade School at Kuala Lumpur had 90 students, as against 92 in 1931 and 77 in 1930. It is not possible to increase the numbers further with the present accommodation. The percentage attendance was 97.9. "Paying" students were admitted for the first time. Employment was found for 20 of the 26 boys who left the school on the completion of their training; 2 of them went to the Civil Aerodrome, Singapore. During the year the Instructor conducted a special class on "Oil Engines", attendance at it being voluntary; 10 students joined it; 3 were asked to stop as they did not show signs of benefiting; the remaining 7 were sent to the Chief Inspector of Machinery for examination with a view to their receiving Second Engineer's Certificates and 6 were successful.

There were 75 students at the Trade School, Ipoh, 67 being Malays. The average enrolment of the Trade School at Bagan Serai was 52. Carpentry classes are attached to nine Malay schools in Perak; 40 students were examined by the Bagan Serai instructors at the end of their three-year course and the results were satisfactory in all cases except one.

The Trade School, Rembau, opened in 1930 to teach carpentry and wood work, had an enrolment of 53. The progress has been good.

(*d*) *University and Collegiate* (*Post-Secondary*) *Education.*—The highest educational institutions in Malaya are the King Edward VII College of Medicine, Singapore, and Raffles College, Singapore. The course of the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom. Licentiates of the College are thus able to secure admission to the Colonial list of the Medical Register and to be registered as medical practitioners in any part of the British Dominions.

Raffles College, Singapore, was opened in 1928 in order to place education of a university standard within the reach of all the youths of British Malaya who are capable of profiting by it, and to meet an urgent need for qualified teachers for secondary classes. It provides three-year courses in arts and science. Diplomas are awarded to successful students.

The annual examination for the Queen's Scholarships was held in October. Ten candidates sat for this examination. No award was made for the Malay scholarship since the only candidate from the Malay College, Kuala Kangsar, had failed to reach the necessary standard. The scholarship open to all races was awarded to Mr. Victor Ross Arulanandom of the Victoria Institute, Kuala Lumpur. He proposes to study medicine at Cambridge.

Malay vernacular schools.

(*c*) *Vernacular Education.*—Malay vernacular education is entirely free. School buildings (as a rule), quarters for staff, staff, equipment and books are all provided by the Government.

The aim in these schools is (i) to give a general and practical education to those boys who have no desire for an education in English, and who will find employment either in agriculture or in appointments in which a knowledge of the vernacular is all that is required, and (ii) to provide a sound foundation in the vernacular on which an education in English can be superimposed in the case of boys who desire to proceed eventually to an English school.

The school course normally lasts five years, in the course of which period the pupils pass through five standards. The subjects of the curriculum are reading and writing (in the Arabic and romanised script), composition, arithmetic, geography, Malay history, hygiene, drawing and physical training. Boys do basketry and gardening in addition, and girls do needlework and domestic science.

In 1932 there were 452 schools for boys and 87 for girls with average enrolments of 35,719 and 5,396. The Malay teaching staff numbered 1,472.

In Pahang there was a Javanese school with an enrolment of 20 pupils. The Government grant to this school amounted to $90.

Those who are to become teachers in the Malay vernacular schools are in the first instance selected from the pupils who have shown promise. As pupil-teachers they both teach and study till they attain their sixteenth birthdays about which time they sit for an examination qualifying for admission to the Sultan Idris Training College, Tanjong Malim. If they do sufficiently well they are accepted into the College and there undergo a three-year course. Graduates of the College are designated "Trained Teachers".

At the end of the year there were 381 students and one probationer at the Sultan Idris Training College. One hundred and thirty students completed their three-year course. The total expenditure was $122,508. Towards this expenditure the Unfederated Malay States paid $52,500 for their 86 students. The balance was defrayed by the Straits Settlements and the Federated Malay States Governments in the proportion of 1 : 2. The Translation Bureau housed in the College continued to publish school books and light modern literature for the Malays; the cost of the Bureau was $10,569.

Chinese vernacular schools.

There are two Chinese vernacular primary schools in the Federated Malay States maintained by Government, namely—the Chinese Free School, Davidson Road, Kuala Lumpur, and the Chinese Free School, Sentul, Kuala Lumpur. At the end of the year the former had a staff of one headmaster and seven assistant teachers and an enrolment of 244 students, while the latter had one headmaster and two assistant teachers and 98 students. Both schools accommodate boys and girls and the education is free.

Aided schools numbered 109 as compared with 118 in 1931, Perak having 69 as in 1931, Selangor 32 as against 40, Negri Sembilan 6 as in 1931 and Pahang 2 as against 3.

At the close of the year there were 344 registered schools with 860 registered teachers. The total enrolment was 19,830, of whom 5,446 were girls. Compared with the previous year there was a decrease of 11 schools and 10 teachers, but an increase of 948 pupils.

Tamil vernacular schools.

In 1932 there were 14 Tamil Government schools and 214 aided schools with an average enrolment of 8,678 pupils.

No fees are charged in estate schools but in some of the schools run by private bodies the pupils pay. There is usually an arrangement in such schools whereby poor children pay little or nothing. The subjects of the curriculum are reading, dictation, writing, arithmetic and in the higher classes composition and geography. The standard of work differs considerably from school to school, but the general standard in reading, writing, dictation and simple arithmetic is good.

Recreation.

(*f*) *Recreation, Music, Art and Drama.*—Every encouragement was given to pupils to participate in school games. In almost all English boys' schools the maximum amount of games and organised sports, often of the "team" variety, is provided. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket has been increasingly popular; football (soccer), hockey, volley ball, tennis and badminton are played at most schools. Rugby, football and gymnastics are provided at some bigger schools.

In all English girls' schools drill and games are now compulsory as in boys' schools. Some girls' schools have tennis and badminton.

Physical training and games reach a good standard in Malay boys' schools, and football is also played, encouraged by inter-school competitions.

Music.

Music is taught in all Convent schools and occasionally elsewhere. Singing is taught in the lower forms of all schools. Folk songs, national songs, rounds and nursery rhymes are taught as aids to the teaching of English. A few schools have their own orchestras composed partly of masters and partly of boys. Most schools have gramophones which are used to inculcate a love of music.

Handwork and art.

Handwork was taught under the supervision of trained European mistresses in the primary and elementary departments. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, cardboard modelling, clay and plasticine modelling, stick laying, bead stringing, paper flower making, raffia work and wool work. Instruction in net-making is given in 59 Malay schools in Pahang.

Drama.

Dramatisation forms a part of the English curriculum of all English schools. The lower standards act simple plays and dramatise stories. The senior boys and girls act scenes from Shakespeare.

(*g*) *Orphanages.*—The Roman Catholic Church maintains orphanages in the principal towns. The number in the orphanages at Kuala Lumpur, Ipoh and Taiping in 1932 was 667. These orphanages receive some measure of Government support.

The orphans are educated in their own language and in addition receive an elementary English education. The girls are then taught house-keeping and needlework. They generally marry or take up domestic service when they leave, but some continue their education at English schools and become teachers or hospital nurses. The boys go to English schools where they receive the same treatment as ordinary pupils.

CHAPTER X.

Communications and Transport.

POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

Postal facilities are provided in all the towns and larger villages in the Federated Malay States. There are now 99 post offices at which officers of the Posts and Telegraphs Department are employed and 69 places at which postal business is transacted by station-masters and others acting as postal agents. In the course of the year a postal agency was established at Cameron Highlands. Posts.

The number of posting boxes, exclusive of those at post offices and postal agencies, was 311 on the 31st of December.

During the year 169 licences for the sale of stamps, and 332 licences for the collection of letters for transmission to China under the "Clubbed Packet" system, were issued.

The urgent need for reducing expenditure was an important consideration throughout the year, and it was unfortunately necessary to restrict the hours of business at many post offices and to curtail in some degree various postal services. These changes were effected, however, without causing material inconvenience to the general public. All contracts for the conveyance of mails by road were examined, and fresh contracts at lower costs were made wherever possible. With the continued decrease in business the post offices at Batu Laut, Chenderiang and Tras no longer justified the employment of a full-time postal official, and arrangements were made with the Trade and Customs Department whereby at these three places a Chandu Clerk combines the functions of postal agent with his own duties.

With a view to increasing postal revenue, the first rate of postage on letters addressed to any place in Malaya, North Borneo and Sarawak was increased from 4 cents to 5 cents, and the first rate of postage on letters addressed to all other parts of the British Empire and to Egypt was raised from 6 cents to 8 cents. Both these changes took effect from the 1st January, 1932.

For the convenience of those who have occasion to post correspondence in large bulk, arrangements were introduced at certain post offices to permit of postage being prepaid in cash instead of by means of stamps affixed to each individual postal article.

An alteration in the sailing schedule of the Peninsular and Oriental Steam Navigation Company permits of the outward mails from Europe via India now reaching Penang on Thursday mornings instead of Fridays as before, resulting in correspondence being delivered 24 hours earlier throughout the Federated Malay States.

A new edition of the Straits Settlements and Federated Malay States Post Office Guide, revised up to 31st May, 1932, was issued in August.

There were a number of developments in connection with air mails, and the volume of air mail correspondence continued greatly to increase. In March air mails for East and South Africa were introduced, to connect at Cairo with the southward-bound machines of Imperial Airways—conveyance from Alor Star to Cairo being effected by the Bandoeng-Amsterdam Dutch Air Mail. During the year, special low air-mail fees were made applicable to postcards, and on the 1st of July an air mail parcel service was established with Netherlands India via Singapore.

Money orders. All post offices and several postal agencies transact money order business, and during the year 310,146 money orders to the value of $7,654,156 were issued and paid, this being a decrease of 43,992 in number and of $3,321,367 in value compared with 1931. Telegraph money orders included in the main 1932 total amounted to 7,377 in number and $486,216 in value. In the course of the year the money orders rules made under the Post Office Enactment, 1924, were revised and re-gazetted.

Savings bank. At the close of the year there were 47,380 depositors in the Federated Malay States Government Savings Bank, with a total sum of $4,597,012 standing to their credit. Deposits made during the year amounted to $3,750,233 and withdrawals to $3,563,968. Interest credited to depositors amounted to $119,466. Notwithstanding the severe economic crisis, it is pleasing to record an increase of 3 per cent. in the number of depositors and of 7 per cent. in the total amount in deposit.

Telegraphs. There are 102 postal telegraph offices in the Federated Malay States. During the year 219,451 telegrams were despatched and 251,375 were delivered, being a decrease of 28 per cent. in the number despatched and of 27 per cent. in the number delivered as compared with 1931. The telegraph system operated satisfactorily throughout the year and there were no serious interruptions of communications. But viewed as a commercial undertaking the system was unremunerative and means of decreasing working expenses were carefully considered. In the hope of attracting more traffic and of increasing telegraph revenue, the Malayan telegraph rate was altered on the 1st January, 1932, from 5 cents a word with a minimum charge of 35 cents to 4 cents a word with a minimum charge of 40 cents. In August a supplementary charge was made of 20 cents per message on every telegram handed in on Sundays, Christmas Days and Good Fridays. With the object of reducing operating costs, which form a large proportion of the working expenses, it was decided to introduce the telephoning of telegrams to and from small offices and to extend the use of teleprinter working on main line circuits.

Teleprinters had already been used experimentally during 1931 with satisfactory results and an order had been placed for a further supply of these instruments. The additional instruments were received in the early part of the year and installed at Kuala Lumpur and Ipoh for use on the following circuits:

Kuala Lumpur-Singapore.
,, ,, Penang.
,, ,, Ipoh.

The latest instruments supplied were of a new type and gave some trouble initially. These initial troubles were however soon overcome, and the instruments have since been satisfactory. The simplicity and rapidity of the operation of these instruments will render possible a large reduction in operating costs as soon as the necessary staff adjustments can be arranged. A demonstration of teleprinters under working conditions, with voice-frequency equipment over telephone circuits, was given at the annual Malayan Agri-Horticultural Association Exhibition.

The transmission of telegrams by telephone was introduced at 63 of the smaller post offices, where morse-operated telegraph circuits had been previously in use, and has proved satisfactory. Some economy in engineering costs has resulted, but the main advantage lies in the reduced cost of staffing these small offices, where men can now be employed who need not have been expensively trained in morse signalling. As a result of transmission of telegrams by telephone, 19 local telegraph circuits were thrown out of use and dismantled.

Telephones.

The number of direct exchange lines connected to the Federated Malay States telephone system as at 31st December, 1932, was 3,929, a decrease of 824 as compared with the number at the end of 1931.

In addition there were 2,096 extension lines, private lines, and miscellaneous circuits maintained by the department, a decrease of 252 on the previous year's figure.

The revenue derived from telephones was $981,237, a decrease of $196,983 compared with 1931. Of this revenue the amount derived from junction and trunk services was $318,352, a decrease of $83,453 compared with 1931.

As in 1931, 67 public telephone exchanges were in operation in the Federated Malay States during 1932. At the end of the year 97 public call offices were available to the public at post offices or postal agencies. One of the two call offices fitted with coin collecting boxes, which were on trial in Ipoh, was withdrawn during the year, as the results obtained from the trial did not justify its continuance.

A "Personal Call" service between Kuala Lumpur, Ipoh, Penang and Singapore exchanges were introduced on 15th June, 1932. This service provides that, upon payment of a small extra fee known as the "Personal Fee", a trunk call may be booked for connection to a specified person, the telephone staff taking the responsibility of finding that person and of connecting the call only when he is ready to speak. The personal fee was fixed initially at 50 cents, but from experience gained, it was later found possible to introduce a graduated scale ranging from 10 cents to 50 cents according to distance and time of day. It is hoped during 1933 to extend this service to the smaller exchanges throughout the country.

In view of the present depressed conditions consideration has been given to methods of providing telephone service on more attractive terms. The first step in this direction was taken in 1931, i.e., the introduction of shorter agreement terms for subscribers within two miles radius of an exchange. The previous minimum agreement term of one year was then reduced to three months. Modifications in the terms of agreement for lines outside the two miles radius were made during 1932.

It has been clearly established that the subscription rates for the existing facilities are on the low side, and that no reduction of these would be practicable. Consideration has, therefore, been given to the possibility of providing a lower grade of service at lower rates. Two schemes have been decided upon:

(*a*) The simple two-party line system with certain refinements, e.g., separate numbers for each of the parties and selective ringing.

(*b*) The use of the small Parnell-Roberts automatic unit, in conjunction with one line from the exchange, to give access to a number of subscribers, not exceeding ten, whose premises adjoin and are situated at some distance from an exchange. Under this system absolute secrecy, as between the parties, is ensured and each can be called without disturbing the others. The only respect in which such a service is inferior to that of a direct exchange line is in the limited availability of the line joining the automatic unit to the exchange.

It has been found possible to fix for each of the above systems subscription rates which, while covering departmental costs, are considerably cheaper for subscribers, especially those far distant from an exchange, than the rates for direct exchange lines. It was not possible to get either system into operation before the end of the year but it is hoped to introduce both early in 1933.

The Kuala Lumpur Automatic Telephone Exchange was visited by His Excellency the High Commissioner on 1st July, 1932, and by the Engineering Association of Malaya on 27th February, 1932. Papers on various aspects of telephone engineering were read to the Engineering Association.

A model automatic exchange in operation was exhibited at the annual Malayan Agri-Horticultural Association Exhibition in Kuala Lumpur.

Wireless.

Kuala Lumpur.—A new receiving station located at Kenny Road was brought into operation on 21st January, and was operated successfully throughout the year. By confining transmission to Petaling Hill, duplex working by remote control from the main telegraph office has been rendered possible and has proved very satisfactory. This arrangement has enabled a larger volume of traffic to be handled and has permitted the introduction of a regular radiotelephone service between Kuala Lumpur and Kuantan.

During January an emergency telegraphic service between Kuala Lumpur and Penang, and Kuala Lumpur and Singapore, was instituted, enabling wireless telegraphic communication to be brought into operation between these centres immediately upon the occurrence of a breakdown of the main through telegraph route by which communication is normally carried out.

Pahang.—Stations were maintained at Kuantan, Kuala Lipis, Temerloh, Jerantut and Sungei Lembing, the station at Kuala Pahang being closed down on 30th April. All telegraph traffic to Temerloh, Jerantut and Sungei Lembing was handled throughout the year by these stations, Kuala Lipis being regarded as an emergency station to be brought into operation on the occurrence of line breakdowns. All telegraph traffic for Kuantan and Trengganu was handled by the Kuantan station.

A Kuala Lumpur-Kuantan radiotelephone service was inaugurated by His Excellency the High Commissioner on 1st July and has been in operation for two hours daily since that date. This service proved itself of the utmost value during the illness of His Highness the late Sultan of Pahang.

Upper Perak.—Arrangements were in hand at the close of the year to instal a wireless station at Grik for exchanging telegraphic traffic direct with Kuala Lumpur. This service has been rendered desirable by the difficulty of maintaining the existing telegraph lines between Lenggong, Grik and Intan.

Port Swettenham.—Owing to continually dwindling traffic, the Port Swettenham ship to shore service station was closed down on 30th June.

The Port Swettenham-Pulau Kitam police wireless telephone service was maintained throughout the year but was closed down on 31st December at the request of the Police Department, as an economy measure.

Experimental Work.—Experiments in radio-telephonic communication with Bandoeng, Java, and via Bandoeng to Medan, Amsterdam, London and Sydney were carried out. Satisfactory wireless telephone communication was established with Bangkok and Saigon. Experimental telegraphic communication tests were made with Bandoeng, Java.

The use of ultra short wavelengths of the order of five metres for duplex telephone communication was investigated and the results of these tests were very promising.

Other experimental work included the design of a high frequency amplifying unit for the purpose of improving reception of press from Rugby, England, the modification of two short wave transmitters, and the rebuilding of receivers according to more modern circuit arrangements.

Traffic.—The total number of messages handled by the Kuala Lumpur station in connection with transmission to, and reception from, all Pahang stations was: sent 22,758, received 18,861. The corresponding figures for 1931 are: sent 14,242, received 15,052.

Wireless Receiving Licences.—Two hundred and thirty-six licences for the use of wireless receiving apparatus were issued during the year, as compared with 223 in 1931 and 179 in 1930.

Broadcasting.—Three transmissions weekly averaging two hours for each transmission were made on behalf of the Malayan Amateur Radio Society, Kuala Lumpur. In June the transmission of outside broadcast programmes was discontinued in order to improve quality, and since then all programmes have been supplied from the Petaling Hill wireless station itself.

Financial.

The nett revenue collected by the Posts and Telegraphs Department in 1932 was $2,268,986, a decrease of $490,361 compared with 1931. Annually recurrent expenditure amounted to $2,245,167, against $2,449,719 in the previous year. Special expenditure in 1932 (including loan account) amounted to $171,314. These revenue and expenditure figures do not include the value of services rendered free of charge by or to the Posts and Telegraphs Department, nor do they include temporary and acting allowances to the amount of $5,339.

RAILWAYS.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles), extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island, to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying the railway and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the West Coast and the East Coast Lines.

The West Coast Line runs north-north-west through Negri Sembilan, Malacca, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour about 488 miles from Singapore. From Bukit Mertajam seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on the 1st July, 1918, the distance between Singapore and Bangkok being 1,195 miles.

The East Coast Line, the last link of which was completed during the year, 1931, proceeds northwards from Gemas through Negri Sembilan, Pahang and Kelantan terminating at the port of Tumpat. The length of the line is 328 miles and provides an alternative route to Siam from Singapore. A branch line 11¾ miles long has been made from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, where it joins the Siamese Line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore Line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on 1st November, 1921.

Branch lines connect the main line with ports on the West Coast of Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld.

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak; Kuang-Batang Berjuntai, 14 miles; Kuala Lumpur-Batu Caves, 8 miles; Sungei Besi-Sultan Street, 8 miles; Sultan Street-Ampang, 6 miles; Connaught Bridge Junction-Kuala Selangor, 30 miles, all in Selangor.

The Kuala Kubu Road-Kuala Kubu Branch in Selangor was closed to traffic during the year under review. The branch line from Seremban to Port Dickson was closed for passenger traffic during the year 1930, as the revenue obtained did not justify the retention of the passenger services. The Connaught Bridge Junction to Kuala Selangor Branch was closed to traffic in the latter part of the year 1931 for similar reasons.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,067 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are provided with restaurant cars and sleeping saloons.

There are 219 permanent stations and 66 flag stations.

Financial.

The expenditure on capital account (including lines not yet open for traffic) was $233,283,625 up to 31st December, 1932, of which $183,813,672 was met from revenue advances and $49,469,953 from Loan Funds.

The receipts in 1932 from all sources were $9,483,859, a decrease of 26.55 per cent. compared with 1931. Expenditure chargeable to revenue (excluding Renewals Fund contribution) amounted to $10,980,855, a decrease of 17.01 per cent. The receipts from all sources were $1,496,996 less than the total expenditure on all services and no contribution has therefore been made to the Railway Renewals Fund.

Capital expenditure.

During the year the nett expenditure on capital account was $691,397 as compared with $1,968,776 in 1931.

Renewals Fund.

The expenditure met from the Railway Renewals Fund during the year amounted to $1,255,365 compared with $1,940,420 in 1931. The balance standing to the credit of the Fund at 31st December, 1932, was $6,816,467 the corresponding figure at 31st December, 1931, being $8,071,832.

Passenger train traffic.

The receipts from passenger train traffic amounted to $3,685,751 compared with $4,983,086 in 1931, a decrease of $1,297,335 (26.03 per cent.).

Goods train traffic.

The receipts from goods train traffic amounted to $4,037,965 compared with $5,854,955 in 1931, a decrease of $1,816,990 (31.03 per cent.).

Road motor transport services.

The receipts from road motor collection and delivery services amounted to $97,548. Rail-head motor services form valuable feeders to the Railway and offer the additional advantage of door-to-door service.

Miscellaneous services (docks, ferries, rents, etc.).

Miscellaneous services produced receipts to the amount of $1,662,595 during the year 1932 compared with $2,025,601 in the previous year—a decrease of $363,006 (17.92 per cent.).

The revenue returns for the year reflect the continued severe slump conditions and intense competition.

Train control.

The train control system covers the main line between Prai and Singapore (488 miles) and there is also direct super-imposed telephone communication on the East Coast Line from Gemas to Kuala Krau and Kuala Lipis. The system proves very satisfactory in controlling the movement of rolling stock, checking unnecessary haulage, light loading of wagons, reducing light engine mileage and in arranging relief for trainmen and in expeditiously restoring communication in cases of accidents or breaches in the line.

Construction.

Deviation of the railway between Bukit Timah and Tanjong Pagar was completed and the line was opened for traffic on 3rd May, 1932.

Railway Board.

The Railway Board composed of four official and seven unofficial members held six meetings during the year.

ROADS.

The total mileage of roads on 31st December, 1932, was 2,865¾ miles of which 1,935 miles or 67.5 per cent. are bituminously treated.

The expenditure on road maintenance was drastically reduced during the year and the average cost of upkeep was $577.42 per mile as compared with $1,070 in 1931 and $1,241 in 1930.

The total expenditure on the maintenance of metalled roads amounted to $1,654,753 as compared with $2,960,968 in 1931 and $3,385,988 in 1930.

In addition to metalled roads 152 miles 26 chains of unmetalled roads and 1,644 miles 52 chains of bridle-paths were maintained.

The roads are maintained by direct labour, Indian labourers being used for the most part.

Transportation on the roads is mainly by motor traction. The number of bullock-carts has decreased considerably during the last few years.

SHIPPING.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during 1932 were 2,596 vessels and 5,925,736 tons as compared with 2,772 vessels and 6,228,484 tons in 1931, being a decrease of 302,748 tons.

The number and tonnage of ocean-going steamers entered and cleared at this port were 1,314 vessels and 5,250,130 tons as compared with 1,406 vessels and 5,555,534 tons in 1931, being a decrease of 305,404 tons.

The number of ocean-going steamers which came alongside the wharf was 197 against 259 in 1931. The largest vessel entering the port was s.s. "Ulysses" (British) of 14,652 tons. The deepest draft vessel entering the port was s.s. "Calchas" (British) drawing 32′ 5″ of water.

The following table shows the nationality, number and tonnage of merchant vessels entered and cleared at Port Swettenham during 1932:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American	13	45,907	13	45,907	26	91,814
British	456	1,948,654	456	1,948,654	912	3,897,308
Danish	21	81,345	21	81,345	42	162,690
Dutch	60	221,851	60	221,851	120	443,702
German	36	163,039	36	163,039	72	326,078
Italian	2	8,575	2	8,575	4	17,150
Japanese	27	116,633	27	116,633	54	233,266
Norwegian	42	39,061	42	39,061	84	78,122
Total	657	2,625,065	657	2,625,065	1,314	5,250,130

CHAPTER XI.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—7 branches.

Hongkong and Shanghai Banking Corporation—2 branches.

The Mercantile Bank of India Limited—4 branches.

There are no Agricultural or Co-operative Banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under Enactment 16 of 1921 the standard weights and measures are:

(i) The Imperial Standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns ... ... = 1 chi
10 chi ... ... = 1 tahil (1⅓ oz.)
16 tahils ... ... = 1 kati
100 katies ... ... = 1 pikul (133⅓ lbs.)
40 pikuls ... ... = 1 koyan

CHAPTER XII.

Public Works.

The expenditure of the department was $7,185,439 against a net authorised provision of $8,304,687, the unexpended balance of $1,119,248 being accounted for as follows:

Annually Recurrent		$609,930
Special Expenditure		5,049
Special Services:		
Revenue	$107,820	504,269
Loan	396,449	

The value of work carried out by the Public Works Department on behalf of other departments amounted to $330,137 which, added to the above figure of $7,185,439, gives a total expenditure for the year of $7,515,576.

The percentage of cost of establishment to total expenditure was:

	Per cent.
Civil Engineers and Architects	7.78
Technical Subordinates	4.06
Overseers under Schemes	2.19
Overseers and Sub-overseers on Open Vote ...	.70
Store and Depôt Keepers	1.14
Clerical (excluding Financial)	2.45
Financial Staff	1.14

The total expenditure of $7,185,439 was made up as under:

Annually Recurrent		$4,430,611
Other Charges, Special Expenditure ...		4,801
Special Services:		
Revenue	$1,453,729	2,750,027
Loan	1,296,298	

The corresponding figures for 1931 were:

Annually Recurrent	$7,381,435
Other Charges and Special Expenditure	117,154
Special Services	5,516,591

being a decrease of $5,929,741.

The comparative percentage of expenditure to authorised provision in 1932, 1931 and 1930 were as follows:

	1932. Per cent.	1931. Per cent.	1930. Per cent.
Annually Recurrent	87.89	90.77	93.92
Other Charges and Special Expenditure	48.73	86.51	67.66
Special Services	84.5	63.69	89.26

All public services such as roads, waterworks and Government offices were maintained in good order.

There was a gradual fall in the cost of all building materials and labour during the year.

Owing to the necessity for retrenchment and stringent economy considerable reduction in the staff was necessary. The labour force of the whole department was greatly reduced, while in Perak a reduction took place during the year from 3,996 to 2,012.

DRAINAGE AND IRRIGATION.

At the commencement of the year all questions affecting drainage and irrigation were dealt with by a separate department which had its head-quarters in Kuala Lumpur.

The maximum, minimum and mean discharges in cubic feet per second per square mile of catchment area for each month of the year were computed at 28 stations, 15 of which were on rivers in the State of Perak, 10 in Selangor, 2 in Negri Sembilan and 1 in Pahang.

The discharge of 11,233 cusecs equivalent to 62.75 cusecs per square mile of catchment observed at Market Street Bridge, Kuala Lumpur, on 15th October, 1932, is the highest recorded for the Klang river in a period of 20 years, the previous maximum being 8,000 cusecs during the flood of December, 1926.

Six major and several minor irrigation and drainage schemes were made during the year.

The construction of the Sungei Manik Irrigation Scheme for the irrigation of some 5,000 acres in Lower Perak near Teluk Anson was commenced in April. Further progress was delayed until July owing to the deliberations of the Retrenchment Commission, but it is hoped that the work will be completed in order to enable this area to be planted during the 1933 planting season.

A new spillway at Bukit Merah Reservoir in Krian was completed during the year and the maintenance of the irrigation works was carried out in a normal and satisfactory manner.

In Selangor a commencement was made with the felling of the jungle and clearing of reserves for the scheme of controlled drainage for an area of approximately 15,000 acres at Panchang Pedina in Sabak Bernam. About 30 per cent. of the work has been completed by the close of the year which was very satisfactory as the clearing was impeded by very wet weather and the water-logged nature of the ground.

In Negri Sembilan some 1,700 acres of *padi* land were irrigated by 14 dams, 9 of which are upkept by the cultivators themselves.

Seven small irrigation works were executed in Temerloh, Pahang, and one larger one at Bentong.

All the main rivers of the Federated Malay States were maintained in good order by snagging, widening, bank-conservancy, and channel control.

Thirty-six miles of the Kinta river below Ipoh were upkept and the flood channel through Ipoh was maintained in first class order throughout the year.

A section of the new flood channel for the Klang river was completed through the heart of Kuala Lumpur town and the flood of the 15th October was passed without causing flooding of the commercial part of the town, the actual flood levels compared with those of December, 1926, being reduced by six feet at the old Victoria Institution buildings in High Street.

A great deal of reconstruction work was done on the Coast bund at the Bagan Datoh drainage area during the year, and this materially facilitated rapid drainage in that area after heavy rain.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment, 1918, and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;

(*b*) Courts of a Magistrate of the First Class;

(*c*) Courts of a Magistrate of the Second Class;

(*d*) Courts of a Kathi and Courts of an Assistant Kathi;

(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record. The establishment consists of a Chief Justice and three Judges, but the Judges of the Supreme Court of the Colony and of the State of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The qualification required of a

Judge is that he should have five years' seniority as a barrister or a member of the Faculty of Advocates in Scotland or ten years as an advocate and solicitor of the local bar.

Magistrates are appointed by the Resident by name or office. Appointments have always been made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally, every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a Penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a Penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment, 1928, for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code, 1923, in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

The total approved strength of the Police Force is 4,336, comprised as follows:

116	British Officers;
52	Malay and other Asiatic Officers;
2,229	Malay Rank and File;
1,699	Northern Indian Subordinate Police Officers and Constables;
240	Detectives (of various nationalities);

in addition there is a Veterinary Police Force of 68 Malays and Indians which, for disciplinary purposes and reasons of economy, is housed in Police barracks and is paid from Police votes, though under the direction of the officers of the Veterinary Department.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang the police contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner, who, subject to the general direction of the Commissioner of Police, is responsible to the British Resident for the efficiency of his contingent. A fifth contingent exists in the depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner, who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is also in Kuala Lumpur the Head-quarters staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch, which co-ordinates the criminal and political intelligence of the Federated Malay States, and the Criminal Registry or finger-print bureau, which serves not only the Federated Malay States but the Straits Settlements and Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hong Kong, Dutch East Indies, Siam and Indo-China.

The Federated Malay States Police furnishes British Officers for the Unfederated Malay States and for the Federated Malay States Railway Police.

The shortage of 270 in the uniformed rank and file was due to the adoption of the policy approved by Government during the year, namely, to close such minor stations as were considered of doubtful value on account of altered conditions or to reduce their strength. In effecting this change it was decided to reduce the strength by 300 during the year. It is too early yet to say if the reductions can be made permanent. On 1st January, 1932, the total uniformed rank and file was 3,919, comprised of 2,289 Malays and 1,630 Indians; on 31st December the total was 3,649, of whom 2,217 were Malays and 1,432 Indians.

The Detective Branch was 21 below strength at the end of the year.

Malays presented themselves for enrolment as recruits in large numbers, including a proportion of youths with English education; no Malays who did not possess an adequate knowledge of Romanised Malay or who were non-peninsular Malays were enrolled. During the year 107 Malays were enrolled compared with an average of 237. No Indians were enrolled, the previous average being 128.

For the third year in succession the average height of Malays recruited was 5′ 5″, chest measurement 34″ and age 20.

It was noticeable that pupils from the vernacular schools, the Malay boy with a Standard V Certificate, assimilated instruction quicker than the pupils of the 4th and 5th Standards of the English schools.

The number of offences reported during 1932 totalled 86,552 compared with 86,236 in 1931. Seizable offences increased from 10,584 to 11,029 and non-seizable offences decreased by 159 and totalled 75,493. At the close of the year convictions had been obtained in 3,196 of the seizable reports.

The total number of murders, gang-robberies and robberies was 307 compared with 352 in 1931 and an average of 267; of the murders, fourteen were committed in the course of robbery or gang-robbery.

There were 9 instances of abduction reported in 1932, compared with 11 in 1931. All were committed by Chinese in Perak; in fact all took place in the vicinity of the Kinta valley.

Of the 11 persons kidnapped in 1931 mention was made in last year's report that all except one had been accounted for at the end of the year. This unfortunate man was a Hokkien rubber dealer of Bikam who, on the 14th September, 1931, left on his bicycle on business for the neighbouring village of Bidor and disappeared. It was ascertained that he had been kidnapped by a gang of seven Chinese who had secreted him in the jungle and were treating with his relatives for ransom. In consequence of the searching investigations of the police the kidnappers became alarmed and murdered their victim. Finally six of the gang were arrested in March, 1932; two were sentenced to six years' rigorous imprisonment and the remaining four were banished.

A total of 24 firearms was reported as lost or stolen during the year, of which 10 were recovered by the police and four other weapons were recovered and identified as having been lost in previous years. In addition 102 firearms were seized, of which 56 were home-made guns and 2 were home-made pistols.

Cases of house-breaking involving theft totalled 1,878, the largest number recorded yet and comparing with 800 in 1928 (five years previously).

The year 1932 was the first complete year in which the police operated the suppression clauses of the Women and Girls' Protection Enactment, the law devised to control the social problem and involving the suppression of brothels. This work was formerly carried out by the Chinese Protectorate but that department confines its activities now to operating the rescue clauses. There were 106 reports during the year compared with 71 in 1931. The problem has been kept well in hand and, so far as is known, there is no systematic procuration or trafficking. The country is probably as free from brothels as can be expected and their suppression has not in any way been reflected in the number of reports received of rape or indecent assaults on women.

There was a drop in the amount of traffic work involved in testing drivers and issue of motor licences, the direct outcome of the economic crisis. There is no separate Traffic Branch in Pahang.

Loadometers were more effectively used than hitherto for checking overloaded lorries.

The total number of finger-print slips in the files on 31st December, 1932, relating to criminals was 233,791.

PRISONS.

There are six prisons in the Federated Malay States located as follows:

Taiping;
Batu Gajah;
Kuala Lumpur;
Seremban;
Kuala Lipis;
Kuantan.

The prison at Taiping is primarily a convict prison; the other prisons are local.

In addition to the prisons, there are lock-up cells at certain police stations where prisoners are detained for short periods.

Vagrants are confined in special Vagrant Wards.

The total daily average population of all the prisons in 1932 was 1,829.66; at the beginning of the year it was 1,863. Eleven thousand, five hundred and fourteen persons were admitted during the year, 11,723 were discharged, 12 died and 9 executed. There was thus a total of 1,633 remaining on the 31st December, 1932.

The health of the prisoners was uniformly good.

There is no special institution for the accommodation of juveniles in the Federated Malay States. Juvenile offenders may be sent to the Reformatory at Singapore; this institution is under the administration of the Education Department There is no probation system.

CHAPTER XIV.

Legislation.

Forty-one Enactments were passed during the year 1932. Of these two were Supply Enactments and twenty-one were purely amending Enactments.

The list of Enactments which were not purely amending Enactments is as follows:

(1) The Sale of Goods Enactment which repeals Chapter VIII of the State Contract Enactments and introduces the somewhat fuller provisions which are contained in the Indian Sale of Goods Act.

(2) The Water Supply Enactment which repeals and re-enacts with amendments the Water Supply Enactment, 1926.

(3) The Pensions (Temporary Provisions) Enactment which legalises as a temporary measure the granting of pensions to any officer who retires with not less than ten years service, irrespective of his age.

(4) The Country Lands (Cultivation) Suspension of Operation Enactment which in the case of certain titles suspends the operation of the Country Lands (Cultivation) Enactment, 1914.

(5) The Excise Enactment, 1932, which repeals and re-enacts with amendments the Excise Enactment, 1923.

(6) The Revised Edition of the Laws Enactment which provides for the preparation of a Revised Edition of the Laws.

(7) The Trustee Enactment which repeals and re-enacts with considerable additions the Trustee Enactment, 1920. It is closely modelled on Straits Settlements Ordinance 14 of 1929 and on the English Trustee Act, 1925.

(8) The Health Boards (Dissolution) Enactment which provides for the dissolution of the Boards appointed under the Health Boards Enactment, 1929.

(9) The Mui Tsai Enactment which considerably expands the provisions relating to Chinese female domestic servants of the type known as Mui Tsai following Straits Settlements Ordinance No. 5 of 1932.

(10) The Registration of United Kingdom Designs Enactment which follows Straits Settlements Ordinance 6 of 1931.

(11) The Interpretation and General Clauses Enactment which repeals and re-enacts with considerable amendments the State General Clauses Enactments, 1897.

(12) The Legitimacy Enactment which introduces in regard to Christians the principle of "legitimatio per subsequens matrimonium" and is based on the English Legitimacy Act, 1926.

(13) The Sale of Food and Drugs Enactment which repeals and re-enacts with amendments the Sale of Food and Drugs Enactment, 1913.

(14) The Legal Tender (Supplementary) Enactment which affects an amendment to the schedule to the Legal Tender Enactment, 1913.

(15) The Land Rents Enactment which as a temporary measure authorises the payment of land rents by instalments.

(16) The Vehicles (Repeal) Enactment which repeals the Vehicles Enactment, 1912. The latter Enactment was with amendments replaced by four Enactments passed by the State Councils.

(17) The Prevention of Disease Enactment which makes provision for the control of disease relating to human beings and *pro tanto* repeals the State Quarantine and Prevention of Disease Enactments, 1903.

(18) The Machinery Enactment which repeals and re-enacts with amendments the Machinery Enactment, 1927.

The list of amending Enactments is as follows:

(1) The Sanitary Boards (Amendment) Enactment which amends the provisions of the principal Enactment relating to markets, nuisance orders and open spaces.

(2) The Seditious Publications (Prohibition) Amendment Enactment which amends an omission in the principal Enactment by including the Rulers and Governments of the Unfederated Malay States within the scope of section 3 of the principal Enactment which did not extend to them as the law stood.

(3) The Customs (Amendment) Enactment which supplies procedure for the condemnation of goods seized.

(4) The Estate Duty (Amendment) Enactment which corrects an unfortunate error.

(5) The Labour Code (Amendment) Enactment which repeals the provision, imposing a fee of $1. to be paid to the Indian Immigration Fund, on local engagements of Indian labourers.

(6) The Malayan Planters' Provident Fund (Amendment) Enactment which is repealed by Enactment 22/32.

(7) The Post Office (Amendment) Enactment which introduces a new chapter dealing with importation by post.

(8) The Customs (Amendment No. 2) Enactment which amends the provision of the principal Enactment relating to importation of dutiable goods, and other provisions slightly.

(9) The Labour Code (Amendment No. 2) Enactment which introduces new provisions relating to Netherland Indian labourers.

(10) The Workmen's Compensation (Amendment) Enactment which makes a number of amendments found to be necessary.

(11) The Courts (Amendment) Enactment which increases the powers of Magistrates of the First Class.

(12) The Government Suits (Amendment) Enactment which repeals the provision of the principal Enactment relating to appearance of the Legal Adviser and substitutes new provisions.

(13) The Malayan Planters' Provident Fund (Amendment No. 2) Enactment which amends the provision of the principal Enactment relating to protection of individuals against legal proceedings.

(14) The Prisons (Amendment) Enactment which legalises detention of a prisoner in a police station for a certain period.

(15) The Ports (Amendment) Enactment which makes better provision for securing that small craft should be seaworthy and should be used with due regard to safety.

(16) The Distribution (Amendment) Enactment which amends the law regulating distribution.

(17) The Police Force (Amendment) Enactment which makes better provision as to additional constables and departmental police.

(18) The Probate and Administration (Amendment) Enactment which gives power to the Official Administrator to assume administration in certain cases.

(19) The Criminal Procedure Code (Amendment) Enactment which effects a number of minor amendments to the principal Enactment.

(20) The Estate Duty (Amendment No. 2) Enactment which requires estate duty to be paid in cash.

(21) The Companies (Amendment) Enactment which makes amendments found to be necessary.

The principal subsidiary legislation passed during the year is as follows:

Air Navigation Enactment, 1929—

Gazette Notification No. 266 of 13th January, 1932.

Rules issued by the Chief Secretary relating to certificates of airworthiness of aircraft.

Auction Sales Enactment, 1929—

Gazette Notification No. 8733 of 2nd December, 1932—

Rules made by the Judges for regulating auctioneers' commission and expenses on sale of property by public auction.

Courts Enactment, 1918—

Gazette Notification No. 8430 of 18th November, 1932.

Rules made by the Judges for fixing tables of fees and costs chargeable by advocates and solicitors for work done in Courts of Magistrates.

Customs Enactment, 1923—

Gazette Notification No. 1725 of 10th March, 1932.

Imposition of preferential import duties.

Passport Enactment, 1920—

Gazette Notification No. 6055 of 12th August, 1932.

Regulations exempting certain class of persons from producing a valid passport.

Pensions Enactment, 1928—

Gazette Notification No. 4120 of 4th June, 1932.

Regulations in connection with gratuity and reduced pension.

Police Force Enactment, 1923—

Gazette Notification No. 5118 of 1st July, 1932.

Rule allowing a subordinate police officer to retire after 10 years continuous service during the continuance in force of "The Pensions (Temporary Provisions) Enactment, 1932".

Rule Committee (Supreme Court) Enactment, 1930—

Gazette Notification No. 2472 of 24th March, 1932.

Rule prescribing Court procedure.

Tin and Tin-ore (Restriction) Enactment—

Gazette Notification No. 9862 of 30th December, 1932.

Rules consolidating and re-enacting rules passed at various earlier dates for regulating and restricting the production, export, sale, purchase or possession of tin and tin-ore.

Volunteer Enactment, 1924—

Gazette Notification No. 8629 of 18th November, 1932.

Establishment of Federated Malay States Volunteer Force.

Women and Girls Protection Enactment, 1931—

Gazette Notification No. 6496 of 26th August, 1932.

Rules relating to detention of girls in a place of safety.

CHAPTER XV.

Public Finance and Taxation.

Budget for 1932.

The Estimates of Revenue and Expenditure for the year 1932 provided for a revenue of $56,139,067 (excluding Railway revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway expenditure on Revenue Account) of $55,943,755.

Actual revenue and expenditure.

The actual revenue for the year was $43,817,151, while the expenditure, including the deficit on the working of the Railway amounting to $1,496,996 and a contribution to the Supplementary Sinking Fund of $1,143,858 (neither of which items was provided for in the Estimates) came to $53,740,139. There was thus a deficit of $9,922,988 instead of an estimated surplus of $195,312.

The shortages in revenue as compared with the estimate were:

Customs	$ 8,029,301
Excise	1,958,329
Forests	151,430
Lands and Mines	805,536
Licences	393,838
Municipal	301,296
Light, Water, Power, etc.	364,026
Posts, Telegraphs and Telephones	365,016
Interest	181,295
Rent, etc.	76,266
Miscellaneous	43,570
Profit, Government Slipway	4,256
	$12,674,159

The shortages in Customs and Excise revenue are accounted for as follows:

Customs—	
Tin	$1,439,370
Rubber	165,452
Tobacco	2,778,531
Spirits	1,328,604
Petroleum	661,997
Kerosene	352,917
Sugar	612,629
Kachang oil, Ghee, Butter, etc.	156,812
Cloth, Linen, Silk goods, etc.	169,444
Other Items	363,545
Total	$8,029,301
Excise—	
Chandu	$1,408,079
Other Items	550,250
	$1,958,329

The following items failed to yield the estimated amounts by the percentages noted against each:

	Per cent.
Customs	37
Excise	26
Forests	19
Lands and Mines	17
Licences	12
Municipal	10
Light, Water, Power, etc.	11
Posts, Telegraphs and Telephones	14
Interest	5
Rent, etc.	10
Miscellaneous	15
Profit, Government Slipway	34

The excesses in revenue as compared with the estimate amounted to $352,243 as under:

Fees of Court, etc.	$283,438
Timber, etc.	62,128
Land Sales	1,893
Sale of Property	3,310
Grant from Colonial Development Fund	1,474
Total	$352,243

The total savings in expenditure amounted to $7,311,274, the largest items being:

Public Works—Annually Recurrent	$1,514,914
Medical	955,620
Municipal	708,666
Posts and Telegraphs	468,356
Public Works Department	422,824
Trade and Customs	376,398
Education	358,676
Surveys	317,608
Police	222,787
Electrical	196,088
Civil Service	191,276
Printing	149,538
District and Land Offices	141,963
Drainage and Irrigation, Annually Recurrent	136,222
Forest	119,337
Agricultural	109,517
Public Works Extraordinary	108,846
Exchange	96,668
Military	96,079
Clerical Service	89,157
Purchase of Land	83,561
Transport	73,784
Mines	54,725
Malay Officers	43,381
Marine	38,653
Prisons	33,771
The Rulers and Native Officers	23,191
Geological	18,721
Co-operative Societies	18,704
Chinese	18,190
Veterinary	17,993
The Residents	17,726
Drainage and Irrigation Department	16,609
Government Gardens and Plantations	12,323
Treasury	11,268
Total	$7,263,140

Excesses over estimated expenditure totalled $5,107,658 as follows:

Charges on account of Public Debt	$1,143,822
Pensions, etc.	1,803,389
Railways	1,496,996
Miscellaneous Services, Reserved	446,027
Labour	195,694
Drainage and Irrigation, Special Services	6,705
Courts	5,936
Miscellaneous Services, Unreserved Services	5,526
Legal Adviser	2,089
Colonial Development Fund	1,474
Total	$5,107,658

(*a*) The excess under Public Debt Charges is due to the Supplementary Sinking Fund Contribution having been provided in a schedule as an appropriation from past surplus, which is not the recognised procedure.

(*b*) The excess under Pensions, etc., is due to the abnormal retirements on account of retrenchment, and that under Labour is due to repatriation of Indian labourers.

(*c*) The excess under Railways is caused by excess of expenditure over revenue for which no provision was made in the estimates.

(*d*) The following special items of expenditure for which no provision was made in the estimates contributed to the excess under Miscellaneous Services:

1.	Repatriation of unemployed Europeans ...	$ 26,387
2.	,, ,, decrepit and unemployed Chinese	259,619
3.	,, ,, retrenched Government subordinates	18,352
4.	,, ,, others	12,802
5.	Expenses of tin restriction	24,092
6.	Contribution to International Tin Research and Development Scheme	103,869
7.	Interest paid to Midland Bank	71,940
	Total ...	$517,061

Public debt. The total amount of the public debt on 31st December, 1932, was $96,185,714, being:

Straits Settlements Sterling Loan	$80,185,714
Federated Malay States Local Loan ...	16,000,000

The Straits Settlements Loan remained as on 31st December, 1931, at $80,185,714 (£9,355,000). The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) in May, 1922, at 95, with interest at 4½ per cent. The Sinking Funds Contributions, which started in 1925, amount to $18,527,351.

The Federated Malay States Local Loan of $16,000,000 was issued in May, 1931, at 98, bearing interest at 4½ per cent. Contributions to a Sinking Fund for the redemption of this loan will have to be provided out of revenues after the 1st January, 1934.

Assets and liabilities.

The following statement shows the assets and liabilities on the 31st December, 1932:

LIABILITIES.		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		569,243	56
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959), Balance at credit thereof (*c*)		8,112,701	18
Sundry Outstanding Accounts		84,784	72
Due to India (Agency Accounts)		169,750	17
,, ,, (Current Accounts)		70,930	34
Due to Ceylon (Agency A/c) ...		130,349	90
Due to F.M.S. Railway		1,374,165	82
S.S. Government War Service Land Grant Scheme		6,656	93
Family Remittances		925	62
Deposits—			
Courts	$146,452.06		
Forests	188,181.54		
Lands	168,222.94		
Postal	143,445.92		
Postal A/c Stores—Colony	300,000.00		
Planters' Loan Board	600,000.00		
Miscellaneous ...	605,826.70		
		2,152,129	16
Selangor River Protection Reserve Account		94,739	41
Sundry Funds—			
Police Fine and Reward Fund...	$ 44,199.18		
Public Officers' Guarantee Fund	349,027.76		
Composition Stamp Duty Fund	374,694.39		
R.E.R. and P. Reserve Fund	2,394,462.70		
Phillips' Agricultural School Scholarship Fund	4,973.38		
Government Motor Vehicles Insurance Fund	57,270.10		
Malayan Flood Relief Fund ...	46,731.99		
Miscellaneous ...	36,844.45		
		3,308,503	95
War Savings Certificates, 1924-1927		280	00
Opium Revenue Replacement Reserve Fund		26,631,354	58
Suspense		46,512	59
Capital Fund—Bagan Serai Rice Mill		382,129	73
Capital Fund—Kuala Kurau Rice Mill		250,000	00
Capital Fund—F. M. S. Government Factory		400,000	00
Surplus—			
Reserve for Public Works—Special Services	$ 206,001.00		
Reserve for Supplementary Sinking Fund, S.S. Sterling Loan...	19,445,572.00		
Balance unallocated	21,220,020.79½		
		40,871,593	79½
		84,656,751	45½

ASSETS.		$	c.
Cash in Treasuries and Banks as per distribution statement		2,529,468	25½
Cash with Agencies—			
Crown Agents	$ 40,818.11		
Malayan Information Agency ...	32,819.95		
Penang	10,055.56		
Singapore	64,506.62		
		148,200	24
Cash in Transit		429,955	12
Joint Colonial Fund (Crown Agents)		334,285	69
Fixed Deposits		1,300,500	00
Investments Surplus Funds (at valuation)—			
Singapore Municipal Debentures 4 per cent.—1897	$ 891.00		
F.M.S. 4½ per cent. Local Loan, 1959	9,742.50		
Sterling Securities	8,776,507.99		
		8,787,141	49
Perak River Hydro-Electric Power Co., Ltd.	$1,285,714.29		
Nipah Distilleries of Malaya Ltd.	12,857.15		
Sungei Draka Plantations	26,234.22		
		1,324,805	66
Investments—Opium Revenue Replacement Reserve Fund—			
(*a*) Sterling Securities (at valuation)	$19,345,640.29		
(*b*) Sterling Securities Loan to P.R.H.E.P. Coy. Ltd. ...	7,285,714.29		
		26,631,354	58
Investments (Specific Funds) (at valuation)—			
Police Fine and Reward Fund ...	$ 38,079.64		
Public Officers' Guarantee Fund	331,923.29		
Malayan Flood Relief Fund ...	45,898.00		
Securities Deposit Account ...	8,341.65		
Phillips' Agricultural School Scholarship Fund	4,741.50		
Composition Stamp Duty Fund, 4½ per cent. Loan (with Crown Agents)	374,694.39		
		803,678	47
Family Remittances		4,546	30
Due by other Governments—			
Ceylon	$ 276.40		
Crown Agents	1,663.22		
Johore	45,343.79		
Kedah	11,498.16		
Kelantan	6,136.67		
Perlis	4,707.80		
Singapore	5,365.98		
Trengganu	35,534.74		
		110,526	76
Sundry Outstanding Accounts		9,901	01
Loans—			
Siamese Government (*b*) ...	$30,207,735.05		
Brunei Government	387,000.00		
Kelantan ,, ...	300,000.00		
Planters	2,232,006.26		
War Service Land Grant Scheme	1,727,406.72		
Agricultural	26,579.56		
Buildings	321,986.91		
Miscellaneous...	970,533.37		
		36,173,247	87
Advances		55,349	42
Imprests		99,721	87
Bentong Tailings Retention Scheme		250,027	87
Stores and Materials Account—			
Post Office	$1,042,008.22		
P.W.D....	163,800.02		
Electrical Department	691,205.88		
Forest Engineer and Timber Branch	2,453.52		
Marine Slipway	25,984.75		
Burma Rifles	106,363.44		
		2,031,815	83
Marine Slipway Account		14,918	05
Purchase of Tin...		2,370,950	11
Central Health Board		149,251	92
Minor Forest Produce, etc.		8,111	82
Suspense		56,863	39
Bagan Serai Rice Mill		382,129	73
Kuala Kurau Rice Mill		250,000	00
F.M.S. Government Factory		400,000	00
		84,656,751	45½

NOTE:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of the issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of Revenue.

(*b*) Repayment of the loan of $39,586,714.30 by 26 yearly instalments commenced on 1st January, 1924.

(*c*) The 4½ per cent. Local Loan, 1959, has been fully subscribed and appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of Revenue.

Railways.

Separation of the Railway accounts from the general accounts was effected as at close of business on 31st December, 1931. The result on the year's working disclosed a deficit of $1,496,996 which was met from the general revenues.

Loan to Siam.

The loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $30,207,735 on the 31st December, 1932, having been reduced by the payment of the ninth instalment due on 1st January, 1932.

Loan to Brunei.

The loan to Brunei, which stood at $391,000 on 31st December, 1931, has been reduced to $387,000 by the payment of the annual instalment due in 1932.

Loan to Kelantan.

The loan of $300,000 made to Kelantan in 1930, remained unsettled on 31st December, 1932.

Loans—Planters, War Service, etc.

The total amount of loans outstanding on 31st December, 1932, was $3,959,413 against $3,946,400 on 31st December, 1931.

Other loans.

Outstandings on 31st December, 1932, amounted to $1,319,000, compared with $1,741,280 on 31st December, 1931.

Purchase of tin.

The total amount paid for the purchase of tin in July and August, 1932, was $3,363,868, which has been reduced by sales during the year to $2,370,950 on 31st December, 1932.

Surplus.

The surplus on 31st December, 1931, was $50,794,582. As the expenditure for the year exceeded the revenue by $9,922,988 the surplus was reduced to $40,871,594 on 31st December, 1932. A sum of $19,445,572 out of this surplus has been earmarked for the purposes of the Supplementary Sinking Funds of the Sterling Loan in addition to a sum of $206,001 earmarked for specific Public Works Special Services. The unallocated balance of the surplus is, therefore, $21,220,021, but only a part of this is available in a liquid form.

The liquid assets comprising cash, fixed deposits, Joint Colonial Fund and easily realisable investments (excluding the investments earmarked for certain specific funds) amounted to $13,529,551 at the end of the year as compared with $22,466,140 at the beginning.

The investments that are not easily realisable are those in Perak River Hydro-Electric Power Co., Ltd., Nipah Distilleries and Sungei Draka Plantations, amounting in all to $1,324,806.

Opium Revenue Replacement Reserve Fund.

This fund, which was started with $10 millions provided out of revenue in 1925 and $9,828,503 representing contribution of 15 per cent. of the annual revenue from chandu sales for the years 1926 to 1930 and which, together with the accumulated interest from inception to 31st December, 1930, stood at valuation on 31st December, 1931, at $22,873,608, has been increased to $26,631,355 on valuation of securities at current market rates on 31st December, 1932. The fund is invested in sterling securities, with the exception of £850,000 which has been lent to the Perak River Hydro-Electric Power Co., Ltd., as shown on the assets side of the Balance Sheet.

The interest earned on this fund during 1931 and 1932 has been credited to revenue and contribution to the fund during these years was suspended.

Rubber Experimental Research and Propaganda Fund.

This fund which was created by an appropriation of $2,500,000 from surplus funds in 1930 and stood at $2,495,867 on 31st December, 1931, was reduced to $2,394,463 on 31st December, 1932. The commitments against this balance amounted to $1,661,631 on 31st December, 1932.

Sterling Loan Capital Account.

A statement of the Sterling Loan Capital Account is published as Appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549 expenditure on the Railway and other works up to 31st December, 1932, accounted for $73,728,306, leaving a balance of $569,243 still available to meet capital expenditure. This balance is in excess of the estimated balance of $505,475 due to under-spending by the Posts and Telegraphs Department and to a refund of about $27,000 by the Railway Department.

Local Loan Capital Account.

A statement of the Local Loan Capital Account is published as Appendix C to this report.

Of the total proceeds of $15,640,000 expenditure on Railway, Electrical and Public Works accounted for $7,527,299 leaving a balance of $8,112,701 still available to meet capital expenditure in 1933 and subsequent years. This balance is also in excess of the estimated balance of $7,626,790 due to under-spendings by the Electrical and Public Works Departments, although the excess expenditure by the Railway Department amounted to $487,150.

The following is a summary of the Customs tariff:

IMPORT DUTIES.

	Duty.	
Description of article.	**Full duty.**	**Preferential duty.**
Ale, beer, stout, porter, cider and perry	$1.30 per gallon	$1.20 per gallon
Other intoxicating liquors	Graduated from $1.50 to $14 per gallon or proof gallon	90 cents to $8 per gallon
Tobacco	Graduated from 70 cents to $1.60 per pound	$1 per pound for cigarettes and manufactured tobacco if imported for sale to the public in airtight tins or containers
Petrol	35 cents per gallon	
Kerosene	15 cents ,,	
Sugar	5 cents per pound	3 cents per pound
Cartridges	$11 per 1,000	$10 per 1,000
Matches	Graduated from 12 cents per 100 containers and upwards	
Edible oils and fats	Graduated from 4 cents to 20 cents per pound	Graduated from 2 cents to 15 cents per pound
Cement	$12 per ton	$6 per ton
Cement manufactures other than tiles	$2 per ton	
Tiles—roofing, flooring and wall	$12 ,,	$10 per ton. Tiles—flooring and wall
Cosmetics and perfumery	50 per cent. *ad valorem*	25 per cent. *ad valorem*
Textiles and wearing apparel	20 ,, ,,	10 ,, ,,
Rubber boots and shoes and canvas boots and shoes with rubber soles	50 cents per pair	10 cents per pair
Rubber soles	25 ,, ,,	5 ,, ,,
Tanned hides and skins, leather and imitation leather manufactures other than fancy goods	15 per cent. *ad valorem*	5 per cent. *ad valorem*
Cycles and parts	20 ,, ,,	10 ,, ,,
Cycle tyres (outer covers)	15 cents per cover	8 cents per cover
,, ,, (inner tubes)	6 ,, per tube	3 ,, per tube
Motor and motor cycle tyres (outer covers) and inner tubes	20 per cent. *ad valorem*	Free
Pianos	10 ,, ,,	

Description of article.	Duty.	
	Full duty.	Preferential duty.
Other musical instruments, wireless receiving sets and parts thereof including gramophones, electrical gramophones or reproducers, phonographs, records, needles, valves and other parts or accessories	20 per cent. *ad valorem*	10 per cent. *ad valorem*
Coffee	Graduated from 3 cents to 8 cents per pound	
Coffee extract or essence, whether mixed with other substances or not	5 per cent. *ad valorem*	
Ground-nuts	2 cents per pound	1 cent per pound
Milk (including cream) condensed, desiccated or preserved	12½ per cent. *ad valorem*	2½ per cent. *ad valorem*
Fruits, jams, marmalade, vegetables, fish, meats and soups in metal, glass or earthenware containers	20 ,, ,,	5 ,, ,,
Printing paper	10 ,, ,,	Free
Manufactured brass, bronze and copperware	15 ,, ,,	5 per cent. *ad valorem*
Batteries for electric torches or hand lamps	20 ,, ,,	5 ,, ,,
All other electric batteries	15 ,, ,,	Free
Paraffin wax and articles made thereof	15 ,, ,,	5 per cent. *ad valorem*
Fish maws and sharks' fins	15 ,, ,,	5 ,, ,,
Umbrellas and lamp shades covered with silk, artificial silk or cotton	10 ,, ,,	5 ,, ,,
Tea	8 cents per pound	6 cents per pound
Saccharine	$5 per pound	
Fireworks and crackers	10 cents per pound	
Oil cloth and linoleum	10 per cent. *ad valorem*	
Straw, grass and rush manufactures	10 ,, ,,	

EXPORT DUTIES.

Description of article.	Duty.
Coconuts and copra	1½ per cent. *ad valorem*
Gambier	15 cents per pikul
Gutta-percha	2½ per cent. *ad valorem*
Rubber	1 per cent. *ad valorem* when price is under 30 cents per pound, to 5 per cent. when price is 80 cents or over In addition a further duty of 10 cents per pikul for the purposes of the Rubber Research Institute of Malaya

Description of article.	Duty.
Rembia ataps	10 per cent. *ad valorem*
Nipah ataps	Graduated from 75 cents to $1.50 per 1,000
Other kinds	10 per cent. of the whole prices in the centres of production
Getah rambong (India-rubber) ...	$5 per pikul
Formosa camphor	10 per cent. *ad valorem*
Kepong bark	10 ,, ,,
Gold	2½ ,, ,,
Tin—	
Tin smelted or manufactured from tin-ore won in the Federated Malay States. When the price of tin does not exceed $41 (per pikul)	$10 per bhara (3 pikuls or 400 lbs.) and so on, the duty per bhara being increased by 50 cents for every dollar by which the price of tin exceeds $41
Tin-ore	72 per cent. of the duty on tin, with, in the case of tin-ore exported otherwise than under such guarantees as the Chief Secretary may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul
Additional duty on all tin-ore exported	10 cents per pikul or part of a pikul
Tin slag and hard-head of tin ...	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smeltered or manufactured on the amount of tin estimated to be contained in such consignment
Scheelite	$2 per pikul
Wolfram	$2 ,,
All other metals and metalliferous ores	10 per cent. *ad valorem*
*China-clay or kaolin, potash-felspar or soda-felspar intended for use as a flux or a glaze or china-stone ...	2½ per cent. *ad valorem*
Fish	Usually 10 per cent. *ad valorem*
Oysters, fresh	$5 per pikul
Blachan	50 cents per pikul
Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins ...	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,
Elephants	20 ,, ,,

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* These articles are prohibited to be exported except under licences granted by the Chief Secretary.

EXCISE DUTIES.

Description of article.	Duty.
Chinese samsu including medicated samsu	$9 per proof gallon
Other intoxicating liquors	$11 ,, ,,
Matches	$ .09 per 1,000 matches where both matches and containers are made from imported timber $ .08 per 1,000 where the matches only are made from imported timber $ .06 per 1,000 where both matches and containers are made from local timber

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVI.

Miscellaneous.

Electrical Department.

General.

The continued depression had its effect upon the working of the electrical undertakings in the country, and further vigorous efforts were concentrated to reduce expenditure and to operate plant to the finest degree of economy.

It is pleasing to note, however, that in almost every supply area there has been an appreciable increase in the number of consumers, and also that the kilowatts connected per consumer have increased. This is an important factor as it proves the continual demand for electricity, in spite of a fall in consumption due to individual and general economy.

As an example, it will be interesting to study the following table :

	1929.	1931.	1932.
Kilowatts connected	10,500 ...	14,549 ...	17,810
Units generated ...	23,850,345 ...	21,494,177 ...	18,339,387

The year 1929 has been taken as a normal year, and if the ratio between kilowatts connected and units generated be taken for that year and applied to 1932, then if conditions had been normal the units generated would have been about forty millions instead of eighteen millions. This comparison is given to illustrate what is likely to occur at the time when trade revival takes place.

Revenue.

It was not possible further to reduce expenditure to offset the inevitable fall in revenue, and although a reduction of approximately $127,000 was effected, the revenue was short of the 1931 figure by approximately $330,000.

Capacity and output.

The total capacity of generating plants installed in the Federated Malay States shews a slight increase over 1931, being 118,487 kilowatts compared with 116,840 in 1931, but the total units generated during 1932 fell to 144,222,885 compared with 202,172,218 during 1931.

Of these units, 15,923,933 were generated by Government undertakings, and 8,453,110 units were purchased by Government from private undertakings for public supply purposes, the balance being generated by private plant.

The number of installations generating electricity in the Federated Malay States is as follows:

Perak	87
Selangor	32
Negri Sembilan	13
Pahang	7
Total ...	139

which is nine less than in 1931.

Only nine accidents were reported during the year, as compared with fourteen in the previous year; of these, eight proved fatal and enquiries were held in connection with five of them.

COMPANIES.

During the year 26 local companies with a total nominal capital of $7,376,857 were incorporated and registered as compared with 22 with nominal capital of $8,748,769 in 1931 and 32 with a total nominal capital of $7,013,000 in 1930.

The largest number of companies registered in any recent year was 56 ($35,764,500) in 1926 and 54 ($38,934,928) in 1920.

The main objects of the new companies were agriculture including rubber (3), agriculture other than rubber (1), agriculture and mining (1), amusement and entertainment (1), general trade (1), gold mining (3), gold prospecting (2), hotels (1), investment (7), passengers transport (1), promotion of patents (3), tin mining (1) and trust and benefit (1).

Ten companies were public and sixteen private.

Nineteen companies were in voluntary liquidation and three in compulsory liquidation in the Federated Malay States. No winding-up orders were made.

There were 667 companies on the register at the end of the year, 30 having been struck off as dissolved or defunct.

Twenty-seven companies incorporated outside the Federated Malay States filed particulars under section 2 of Enactment IX, 1912, as against 21 and 37 in 1931 and 1930, respectively. The objects of these companies were briefly: agriculture (8), banking (1), engineering and general agents (1), general merchants (3), hill station hotel (1), insurance (3), investment (5), mining (1), nipah distillation (1), sale of oil (2) and underwriting (1). These companies were incorporated in Belgium (1), England (12), Japan (1), Straits Settlements (9), Shanghai (1) and U.S.A (3).

Four companies were under compulsory liquidation in the Federated Malay States, and four known to be in voluntary liquidation.

At the end of 1932, 1,017 companies were on the register as compared with 1,039 on 31st December, 1931.

Fifteen Fire Insurance and 25 Life Assurance Companies were also registered under their respective Enactments governing such business on 31st December, 1932, an increase of one in each category during the year.

Progress was made with the liquidation of the companies in the hand of the Official Receiver. The liquidation of certain companies the assets of which were situate in Siam gave rise to considerable difficulties, legal and others, but should be completed in 1933.

BANKRUPTCY.

During the year 554 bankruptcy notices were issued, 190 petitions filed, 121 receiving orders and 123 adjudication orders made, as compared with 443 notices, 187 petitions, 96 receiving orders and 90 adjudication orders in 1931.

Of the persons adjudicated bankrupt, 55 were Chinese, 34 natives of India, 19 Malays, 4 Eurasians, 8 Ceylonese and 3 Europeans.

By occupation 26 were traders, 20 clerks, 18 landowners, ten contractors, four miners, three married women, one watchman, two milk-sellers, one engineer, one lawyer, one teacher, one share-broker, one cashier, one rubber-dealer, one engine driver; 32 were of miscellaneous occupations.

Insolvency showed a marked increase, especially in Perak and Selangor. The main Bankruptcy Office is in Kuala Lumpur and the Branch Office in Ipoh.

Three compositions and schemes of arrangement were approved by the Court, one in Perak and two in Selangor; and there were 20 discharges, 12 in Selangor, six in Perak, one in Negri Sembilan and one in Pahang, two of which were unconditional and 18 subject to period of suspension.

There were ten prosecutions against bankrupts during the year.

The gross liabilities and assets stated by debtors were $3,698,692 and $3,680,619 respectively; in no previous year have declared liabilities exceeded $1,250,197 (1930). Such figures are valueless in themselves but, compared with $886,783 and $846,986 for 1931, indicate the greater magnitude of the bankruptcies. One failure exceeded $800,000 and two others $500,000. As regards gross liabilities, $2,222,468 were declared at the Kuala Lumpur Office and $1,476,224 at the Ipoh Branch Office.

As from 1st July, 1932, the Official Assignee, Federated Malay States, was liquidator of the Central Health Board in addition.

PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the tenth year of the working of the department of the Public Trustee.

During the year the Public Trustee accepted 25 trusts in all valued at over $600,000; 19 trusts were wound up and at the end of the year 99 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at over $4,500,000.

The office of the Official Administrator, Federated Malay States, created in 1928, is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1930 was 18 valued at over $300,000; 18 estates were wound up and at the end of the year 35 were still being administered.

The total number of trusts and estates administered by the Public Trustee and Official Administrator at the 31st December, 1932, was 134 valued at $4,968,353. The total fees collected by the combined offices during the year amounted to $32,661 compared with $18,718 collected in 1931 and $27,197 collected in 1929, which year hitherto held the record.

CO-OPERATION.

The statistics relate to the period 1st July, 1931, to 31st December, 1932.

Expenditure. The total expenditure for the calendar year 1932, on all counts, was $158,834.

Progress.

The position at the end of the year was as follows:

—	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit Societies	61	1,680	76,826	38,201	129,065
Non-Agricultural Thrift and Loan Societies	26	10,820	2,331,900	216,179	2,625,579
Indian Estate Labourers' Societies	95	10,568	143,396	1,465	147,961
Co-operative Rubber Societies	2	73	451	162	651
Co-operative Union	1	7*	588	700	1,288
Total ...	185	23,148	2,553,161	256,707	2,904,544

Rural Credit Societies.

The continued depression in nearly all branches of agricultural activities made it again a difficult time for rural co-operators. Three societies were liquidated during the period under review.

Loans amounting to $6,249 were granted as compared with $15,554 during the previous 12 months.

Overdue loans increased by about 18 per cent. as against an increase of 30 per cent. shown in the last report. Nine societies worked at a loss as compared with the 12 societies mentioned previously.

Thrift and Loan Societies.

The number of societies on the register remained unchanged. The total membership, however, decreased by 2,397 from 13,217 to 10,820. The heavy retrenchment in both Government and business offices was practically entirely responsible for this decrease. The total paid-up subscriptions decreased from $2,652,674 to $2,331,900, but the Reserve Funds increased materially from $165,675 to $216,179. The amount of loans granted was to the value of $1,894,800 for 18 months compared with $1,460,408 for the previous 12 months. Loans overdue decreased from $65,095 to $11,500.

Money invested in gilt-edged securities or held on fixed deposit amounted to $1,713,939 as compared with $1,697,794 on 30th June, 1931. The gross average savings of members in these societies rose from $200 to $216 and the nett average savings from $117 to $144.

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* Societies.

Indian Estate Labourers' Societies.

Despite the fact that 18 societies had to be liquidated owing to estates shutting down or reducing their labour force to a skeleton, 45 new societies were registered during the 18 months. There is a strong and growing demand for this type of society not only for estates but also for the Indian labourers of Government departments.

The total number of societies has risen from 70 to 95, though the total membership remains practically unchanged at 10,568. The total subscriptions decreased from $187,952 to $143,396 and the average savings per labourer from $17.50 to $14.

In considering this decrease it should be noted that the liquidated societies disbursed over $26,000 to members on liquidation.

Rubber Societies.

Of the two smoking, grading and selling societies, one in Perak has been particularly hard hit by the heavy fall in the price of rubber and has been reduced almost to the point of ineffectiveness. The other society, however, has continued to work fairly well and has produced sufficient capital to continue operations. The prices realised by co-operative sale were slightly better than the local kampong price throughout the year.

LANDS.

The area in private occupation at the end of the year amounted to about 2,599,126 acres under agricultural titles and 205,559 acres under mining titles.

It is estimated that of the 27,500 square miles covered by the four States of the Federation, 15.9 per cent. is land in private occupation and 25.7 per cent. is reserved forest, while the balance of 58.4 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

In the past two years the gross annual expenditure of the Survey Department has been reduced by $700,000 per annum and in 1932 it was substantially below that for 1913, if the cost of the Meteorological Branch, added to the department in 1927, is neglected. The call for economy compelled reductions amounting to nearly a third of the staff, European and Asiatic.

The demand for title surveys again showed a sharp reduction but was substantial enough, in this year of extreme slump conditions, indicate that even a return to moderate prosperity would result in an increase in land transactions sufficient to embarrass the department if staff reductions are continued.

The Topographical Branch succeeded in adding 2,255 square miles to the standard topographical map of the Federated Malay States which now covers 59 per cent. of the country. This is the last year in which any really substantial progress will be recorded.

The full programme of meteorological observations, including pilot balloon ascents from three stations, was maintained. From the 1st November synoptic weather messages giving conditions at selected stations were broadcast twice daily. The number of requests for special information, route reports and forecasts, received from aircraft, Government departments and individuals showed a marked increase.

GEOLOGY.

The detailed geological survey of that district of Perak around Sungei Siput North was continued, and localities were selected which should be prospected for tin-ore. Information from the mining districts of the various States was collected, as usual, and a detailed study was made of an important scheelite occurrence in Kinta, resulting in recommendations for prospecting, which should lead to the discovery of extensions of the deposit.

A considerable amount of time was occupied by the geological work involved in preparing advice for miners and for Government departments, to assist them with problems concerning tin-deposits, gold-deposits, iron-deposits, coal-deposits, limestone, water-supply, spill-way foundations, dam-sites, danger from possible cliff-falls, and other engineering problems. The usual analytical work on metals, minerals, and oils was done by the Chemist for the public and for Government departments, and the increasing number of assays necessitated by the application of the Tin Restriction Enactment more than counterbalanced a small decrease in the number of assays for miners.

PLANTERS' LOANS BOARD.

Agricultural loans.

On 1st January, 1932, the Board had outstanding twenty-seven loans aggregating to $771,950. It lent in new loans (one) and additional loans (five) during the course of the year a further $49,700; while three properties made partial repayments to the extent of $2,500. At the end of the year, agricultural loans outstanding were twenty-eight totalling $819,150.

Urban loans. Urban loans, at the beginning of the year, totalled eighty-seven amounting to $1,121,335. During the course of the year, further new loans (eleven) to the extent of $35,000 and additional loans (four) amounting to $40,300 were made. Repayment in full was made by seven borrowers totalling $71,200, while fifty others made partial repayments to the extent of $89,860. At the end of the year, the Board had outstanding ninety-one loans aggregating to $1,035,575.

War Service loans. Under the War Service Land Grant Scheme, at the beginning of the year, seventy ex-soldiers were indebted to the Board, in respect of loans made to them, amounting to $1,668,250. No repayments were received during the year, the amount outstanding on 31st December remaining unaltered, viz., $1,668,250.

Interest. Interest earned during the year amounted to $123,310, of which $54,732 was in respect of agricultural loans and $68,578 in respect of urban loans. Interest in respect of war service loans was remitted as a measure of relief during the prevailing depression.

Interest collected totalled $126,249, while the amount credited to Federal Revenue in respect of monies outstanding was $117,527.

Profit and loss. The net profit earned by the Board during the year was $11,499.

Reserves. The reserves of the Board on 31st December, 1932, stood at $825,000.

Capital. The capital of the Board is $4,000,000 created by the "Planters' Loans Fund Enactment, 1915".

ESTATE DUTY OFFICE.

The total estate duty collected throughout the Federated Malay States in 1932 was $194,667 as against $506,001 in 1931 and $224,608 in 1930.

Payment of estate duty was generally made by instalments. The continuation of the trade depression not only decreased the value of the estates under assessment but rendered actual payment more difficult. It is still not generally realised that estate duty is a tax on capital and not a tax which can normally be met out of income; even so in the absence of a market sales of land were extraordinarily difficult.

Enactment No. 35 of 1931 which came into force on 1st January, 1932, and increased the rates of duty on estates over $150,000 produced no revenue during the year. Only one such estate was declared and on that duty had not been paid before the end of the year.

VOLUNTEERING.

There was a further serious decrease of 391 in the strength of the Malay States Volunteer Regiment during the year. **Strength.**

Fortunately the numbers and keenness of the Malayan Volunteer Infantry continue to be well maintained.

The Force has increased in efficiency during the year, particularly the majority of the Malayan Volunteer Infantry units, which are now being armed with the Lewis Gun and later on will also be instructed in the Vickers Gun. **Efficiency.**

During the year the Force was reorganised, the volunteers in each State being organised as a battalion composed of Malay States Volunteer Regiment and Malayan Volunteer Infantry Companies. **Reorganisation.**

One independent Machine Gun Company of Malay States Volunteer Regiment personnel and an independent Signal Company of both Malay States Volunteer Regiment and Malayan Volunteer Infantry personnel were formed at Kuala Lumpur.

The senior Volunteer Officer in each State now commands all the volunteers in his State (with the exception of certain independent units), and is responsible to the Commandant for their training and administration.

These changes will lead to greatly increased efficiency and economy without in any way lessening the individuality of either the Malay States Volunteer Regiment or Malayan Volunteer Infantry units.

Considerable financial economies were effected during the year. **Finance.**

GENERAL.

The Federated Malay States in general and the State of Pahang in particular suffered a heavy loss by the death of His Highness Al-Mu'tasim Bi'llah al-Sultan Abdullah, K.C.M.G., ibni al-Marhum al-Sultan Ahmad al-Mu'adzam Shah, the Sultan of Pahang, which occurred on the 22nd June, 1932.

Tengku Abu Bakar ibni al-Marhum al-Muktasim Billah al-Sultan Abdullah was proclaimed as Sultan of the State of Pahang under the title of Sultan Abu Bakar on the 23rd June, 1932.

Mr. B. W. Elles, British Resident, Perak, retired on the 22nd June, 1932.

Mr. J. W. Simmons, British Resident, Selangor, retired on the 29th July, 1932.

His Majesty the King was graciously pleased to confer the following honours at the New Year:

Commander of the Most Excellent Order of the British Empire (Civil Division)	V. A. Lowinger, Surveyor-General, Federated Malay States and Straits Settlements.
Officer of the Most Excellent Order of the British Empire (Military Division)	Lieutenant-Colonel G. M. P. Hornidge, M.C., V.D., Federated Malay States Volunteer Force.
Member of the Most Excellent Order of the British Empire (Civil Division)	J. E. Lesslar, late Senior Deputy Pathologist, Institute for Medical Research, Federated Malay States.
The King's Police Medal	Subedar Nasrullah, Federated Malay States Police.
,, ,,	Hazara Singh, Lance-Corporal, Federated Malay States Police.
The Meritorious Service Medal of the Civil Division of the Most Excellent Order of the British Empire	Hitam bin Mayat, late Sub-Inspector, Federated Malay States Police.

On His Majesty's Birthday—

Companion of the Most Distinguished Order of Saint Michael and Saint George	A. Caldecott, C.B.E., Acting Chief Secretary to Government, Federated Malay States.

Commander of the Most Excellent Order of the British Empire (Civil Division)	A. S. Bailey, Member of Federal Council.
Officer of the Most Excellent Order of the British Empire (Military Division)	Lieutenant-Colonel N. J. A. Foster, M.C., Malay States Volunteer Regiment.
Companion of the Imperial Service Order	G. P. Cuscaden, late Deputy Commissioner of Police, Federated Malay States.
Meritorious Service Medal of the Military Division of the Order of the British Empire	Sergeant J. R. Carlisle, Federated Malay States Volunteer Force.
Meritorious Service Medal of the Civil Division of the Order of the British Empire	Detective Sub-Inspector Kang Sin Yew, Federated Malay States Police.

Certificates of Honour were awarded to the following in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Haji Abdul Jalil bin Nor;
Patrick de Zilwa, J.P.;
Che' Alias bin Yahya;
Arthur Edmonds, J.P.

A Durbar of the Rulers of the Federated Malay States was held on the 28th April at Pekan.

As stated in last year's report the year opened with the certain knowledge that the revenue for 1932 would fall far short of the sum of $56,000,000, at which figure the budget had been balanced in November, 1931. On the 9th day of March, 1932, a Retrenchment Commission was appointed by His Excellency the High Commissioner to hold a full enquiry into manners and means of adjusting the public expenditure to the public income. The Commission sat for some months and presented its report on the 3rd of October, 1932. Although considerable reductions in the expenditure were made during the year, it is clear that the annually recurrent expenditure of the Federation must be still further reduced, and at the close of the year Government was still taking action to this end on the lines recommended in that report. It is not generally realised, however, that of necessity retrenchment is a somewhat slow process in that the full effects of any reduction in personnel or of any reorganisation are not felt for some months after the reduction or reorganisation has taken place. The urgent need for economy has, however, by no means been lost sight of and Government is still making vigorous efforts to put its financial affairs in order.

Brigadier-General Sir Samuel Wilson, G.C.M.G., K.C.B., K.B.E., Permanent Under Secretary of State for the Colonies, visited Malaya during the year in order to examine personally the implications of the decentralization policy. He remained in Malaya from the 10th November to the 9th December, 1932, during which time he received a number of deputations representing all grades of public opinion. His report had not been published at the close of the year.

As a result of representations made by the planting community to Government, that it was impossible for an estate with a quit rent of $4 an acre to survive in the existing economic depression, Government during the year decided to waive all quit rent in excess of $2 per acre.

M. B. SHELLEY,
Acting Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
25th April, 1933.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,662,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,355	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,855	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584	84,660,975	201,393,405	349,012,595	67,041	15,424,409	261,352	4,312,922	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870	82,470,192	168,020,418	213,652,044	62,065	9,127,460	249,675	1,086,370	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659	62,163,328	106,201,211	125,177,183	51,250	5,502,101	243,886	547,411	4,832,700	12,912,579	1,723,117	1931
1932	43,817,151	53,740,139	71,133,301	87,851,281	27,091	3,594,380	234,769	374,547	4,268,125	9,483,859	1,770,486	1932

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* As now corrected.

‖ Excluding bullion and specie

§ *Vide* foot-note on page 99.

† The figures for previous years included items now omitted owing to reclassification of revenue.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31st DECEMBER 1932.

Dr. *Cr.*

	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamp, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamp, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	...	20,367,692 10			
Posts and Telegraphs Department	...	5,597,400 21			
Topographical Survey Department	...	763,362 66			
Topographical Survey of Forest Reserve ...	...	67,063 83			
Forest Department, Perak	...	31,727 95			
Railway—Open Lines	...	9,125,763 07			
,, Construction	...	37,775,296 22	73,728,306 04		
To Balance ...	...	...	569,243 56		
			$80,185,714 29		$80,185,714 29

APPENDIX C.

Dr. F.M.S. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1932. Cr.

	$ c.	$ c.		$ c.
To Expenses of Issue—			By Loan Subscription—	
(*a*) Discount on issue price ...	320,000 00		$4\frac{1}{2}$ per cent. 1959 issued at 98 in May, 1931	16,000,000 00
(*b*) Commission and charges ...	40,000 00	360,000 00		
To Loan Works—				
Railway Department...	2,833,835 07			
Electrical Department	1,684,253 08			
Cameron Highlands	607,964 05			
Water Works...	1,550,901 52			
Klang River Deviation	361,013 33			
Drainage and Irrigation	489,331 77	7,527,298 82		
To Balance	...	8,112,701 18		
		16,000,000 00		16,000,000 00

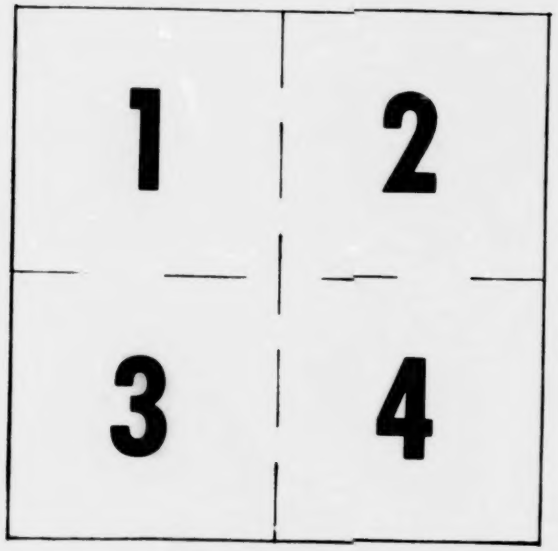
APPENDIX D.

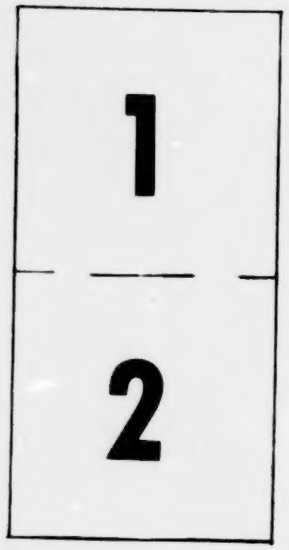
LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

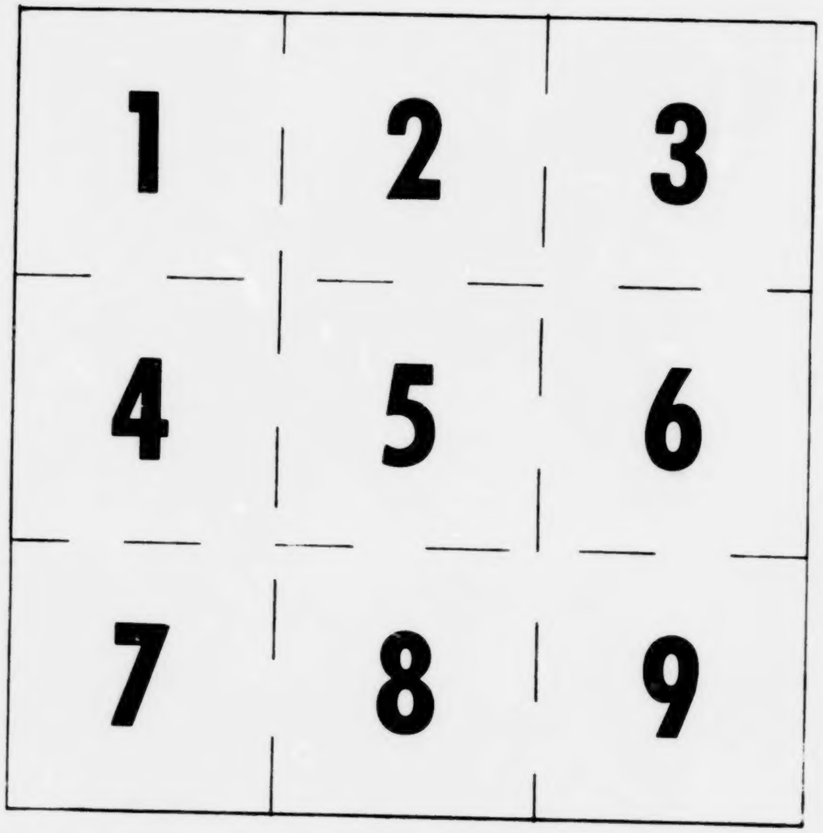
	Cost. $ c.	Where obtainable.
Census Report, British Malaya, 1931	5 00 ...	Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of British Malaya ...	1 50 ...	Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of Malayan Agriculture	1 00 ...	Malayan Information Agency, 50, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 00 ...	Printing Department, Kuala Lumpur, Federated Malay States.
Treaties and Engagements affecting the Malay States and Borneo	3 50 ...	Printing Department, Kuala Lumpur, Federated Malay States.
Geology of Malayan Ore Deposits	8 00 ...	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs Macmillan and Co., Ltd., London.
Geology of Malaya	8 00 ...	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free ...	Malayan Information Agency, 57, Charing Cross, London.
Fisheries of British Malaya ...	5 00 ...	Printing Department, Kuala Lumpur, Federated Malay States.
Commercial Timber Trees of the Malay Peninsula	5 00 ...	Director of Forestry, Federated Malay States, Kuala Lumpur.
Report on the Wild Life Commission (Three volumes) ...	12 00 ...	Government Printer, Singapore.

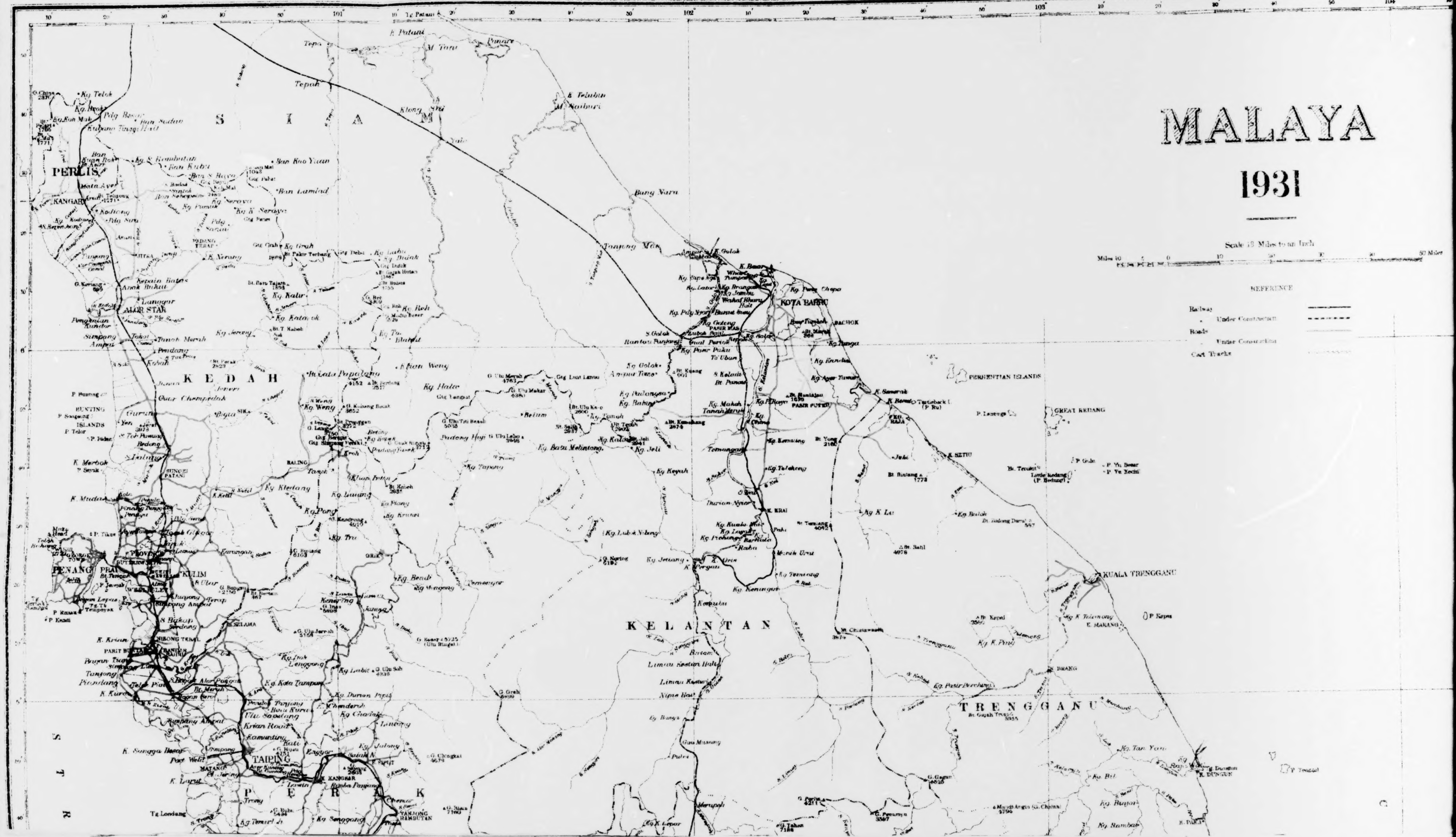
Federated Malay States Government Press.

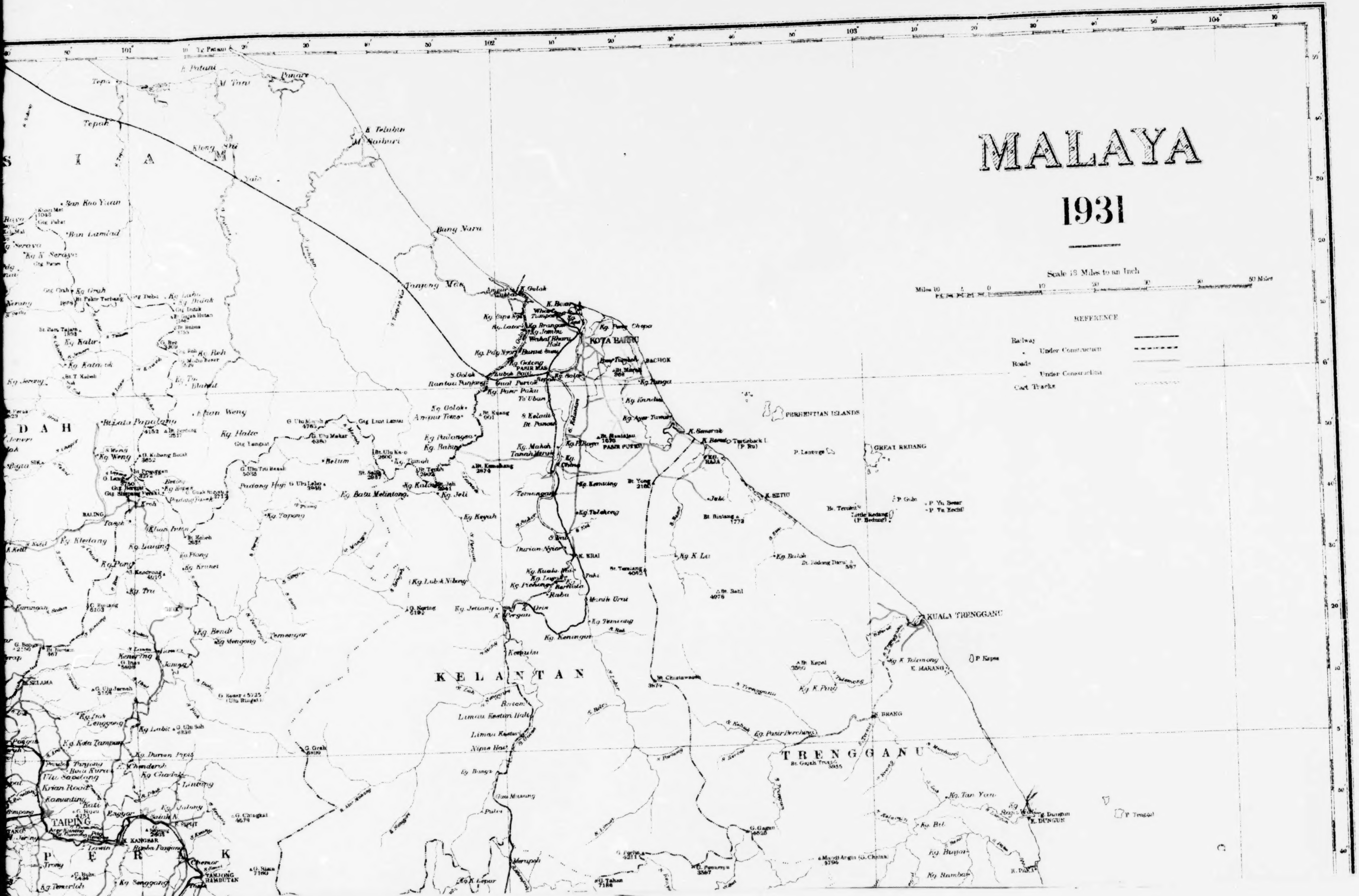
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.








MALAYA
1931
Scale 13 Miles to an Inch
Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Railway
Under Construction
Roads
Under Construction
Cart Tracks
S I A M
PERLIS
KANGAR
ALOR STAR
K E D A H
PENANG
PRAI
KULIM
SUNGEI PATANI
BALING
NIBONG TEBAL
PARIT BUNTAR
TAIPING
MATANG
K. KANGSAR
P E R A K
TANJONG RAMBUTAN
K E L A N T A N
KOTA BAHRU
BACHOK
PASIR PUTEH
K. KRAI
Temangan
Kg. Kenangan
PERHENTIAN ISLANDS
GREAT REDANG
KUALA TRENGGANU
T R E N G G A N U
K. DUNGUN
E. Patani
Tepah
Bang Nara
Tanjong Mas
K. Golok
K. Besar
Bt. Gajah Trang
Gua Musang
P. Kapas
P. Tenggol
S T R



MALAYA

1931

Scale 13 Miles to an Inch

Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Railway
" Under Construction
Roads
" Under Construction
Cart Tracks
101°
102°
103°
104°
6°
S I A M
K E L A N T A N
T R E N G G A N U
P E R A K
D A H
KOTA BAHRU
PASIR MAS
PASIR PUTEH
BACHOK
K. KRAI
Tumpat
K. Besar
S. Golok
Rantau Panjang
Kg. Kenangan
Kuala Krai
Gua Musang
PERHENTIAN ISLANDS
GREAT REDANG
P. Lang
Little Redang (P. Redang)
P. Yu Besar
P. Yu Kechil
P. Kapas
P. Tenggol
K. BESUT
KG. RAJA
K. SETIU
Jerteh
KUALA TRENGGANU
K. MARANG
K. BRANG
K. DUNGUN
Kg. Kandis
Kg. Ayer Tawar
K. Semerak
Bt. Tebu 3495
Bt. Bintang 1773
Bt. Gajah Trum 5935
Bt. Kapal
Bt. Chintawasa
Kg. K. Lal
Kg. Buloh
Kg. Telemong
Kg. Tan Yam
Tg. Patani
Patani
Panare
Tepa
Tepah
Saiburi
K. Telubin
Bang Nara
Tanjong Mas
Ban Kao Yaan
Ban Lamlad
Betong
Keroh
BALING
Kg. Weng
Kg. Jeli
Kg. Batu Melintang
Belum
Temenggor
Kg. Lubok Nibong
G. Noring 6193
G. Ulu Jernih 5154
G. Inas 5860
G. Bubu 5484
G. Chingkai 4579
G. Grah 5819
Lenggong
Kg. Kota Tampan
Kerling
SELAMA
TAIPING
K. KANGSAR
Chemor
TANJONG RAMBUTAN
Bt. Gantang
Kg. Senggang
Kg. Temerloh
Bukit Gantang
Ulu Sepetang
Krian Road
Kamunting
Enggor
Sauk
Kg. Durian Pipit
Chenderoh
Kg. Chariok
Lintang
Gua Musang
Limau Kasturi
Lima Hulu
Kemubu
Kg. Kenangan
Temangan
Kg. Telokong
Kg. Kemasin
Kg. Bunga
Pulai
Merapoh
G. Gagau 4920
G. Tahan 7186
G. Perlis 4311
G. Penumpu 3597
Mandi Angin (G. China) 3794
Kg. Nambar
Kg. Bt.
Kg. Bunga
Kg. K. Pauj
Kg. Pasir Perchong
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K. Pergau
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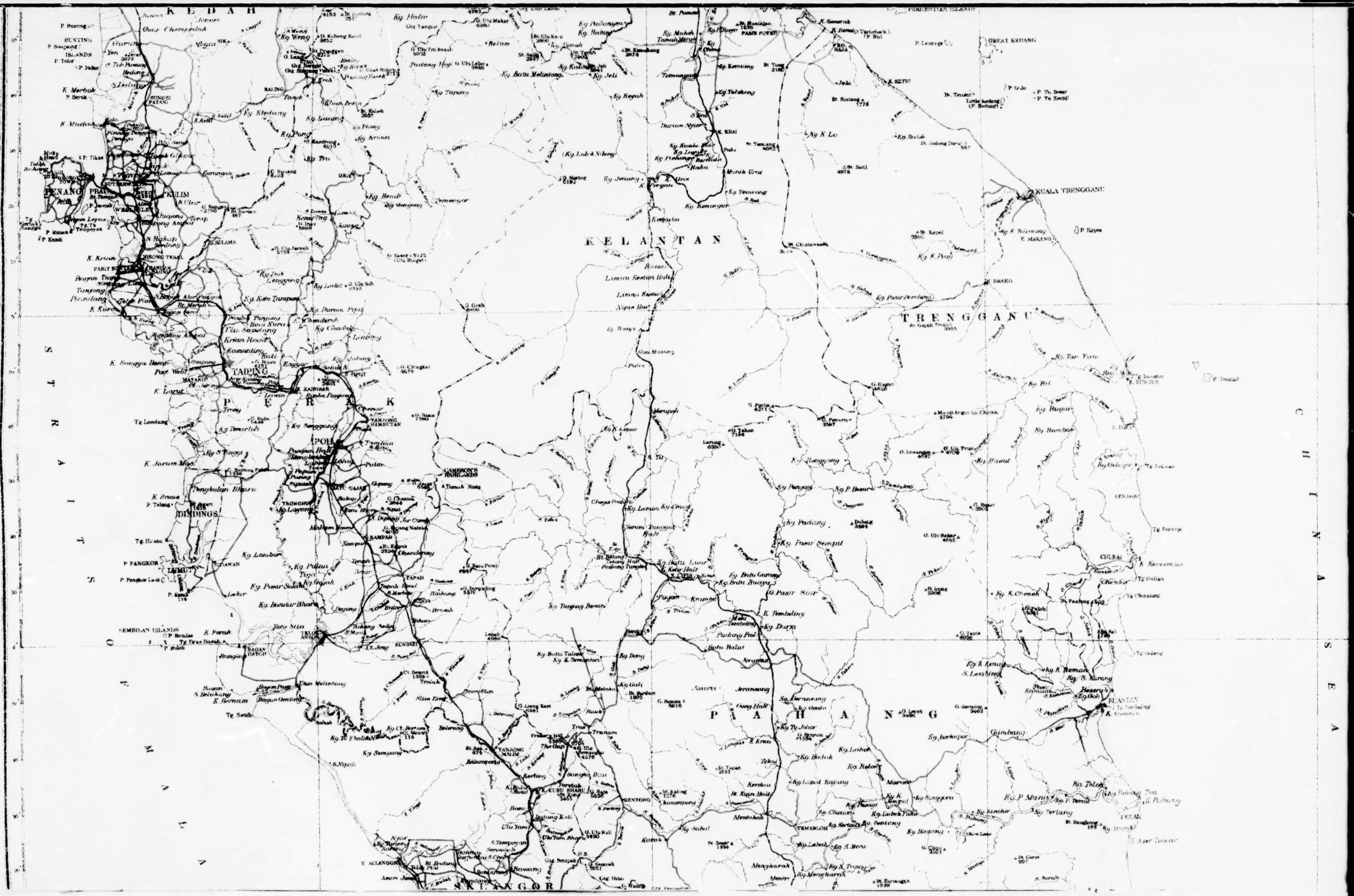
K E D A H
PERHENTIAN ISLANDS
GREAT REDANG
BUNTING ISLANDS
P. Bunting
Gurun
Sungei Patani
Baling
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K. Muda
PENANG
PRAI
Butterworth
KULIM
Bukit Mertajam
Nibong Tebal
Parit Buntar
Bagan Serai
Selama
Grik
K. Krian
K. Kurau
TAIPING
Kamunting
Port Weld
Matang
K. Larut
K. Sangga Besar
Kuala Kangsar
P E R A K
IPOH
Tanjong Rambutan
Chemor
Batu Gajah
Tronoh
Kampar
Tapah
Tapah Road
Bidor
Gopeng
Tg. Londang
K. Jarum Mas
Pengkalan Bharu
K. Bruas
DINDINGS
LUMUT
P. PANGKOR
SITIAWAN
SEMBILAN ISLANDS
TELOK ANSON
BAGAN DATOH
K. Perak
Bagan Serai
Hutan Melintang
K. Bernam
Tg. Sauh
Sungkai
Slim River
Tanjong Malim
Kerling
Fraser's Hill
The Gap
Kuala Kubu Bharu
Ulu Yam
Rawang
S E L A N G O R
CAMERON'S HIGHLANDS
Tanah Rata
K E L A N T A N
Kota Bharu
Pasir Puteh
Tumpat
Tanah Merah
Kuala Krai
Kg. Jeli
Gua Musang
Kg. Batu Melintang
T R E N G G A N U
KUALA TRENGGANU
K. Besut
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K. Dungun
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Chukai
Kg. Bukit Bandi
P A H A N G
Raub
Bentong
Karak
Mentakab
Temerloh
Kuala Lipis
Jerantut
K. Tembeling
Kg. Batu Balai
Kuantan
Beserah
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K. Pahang
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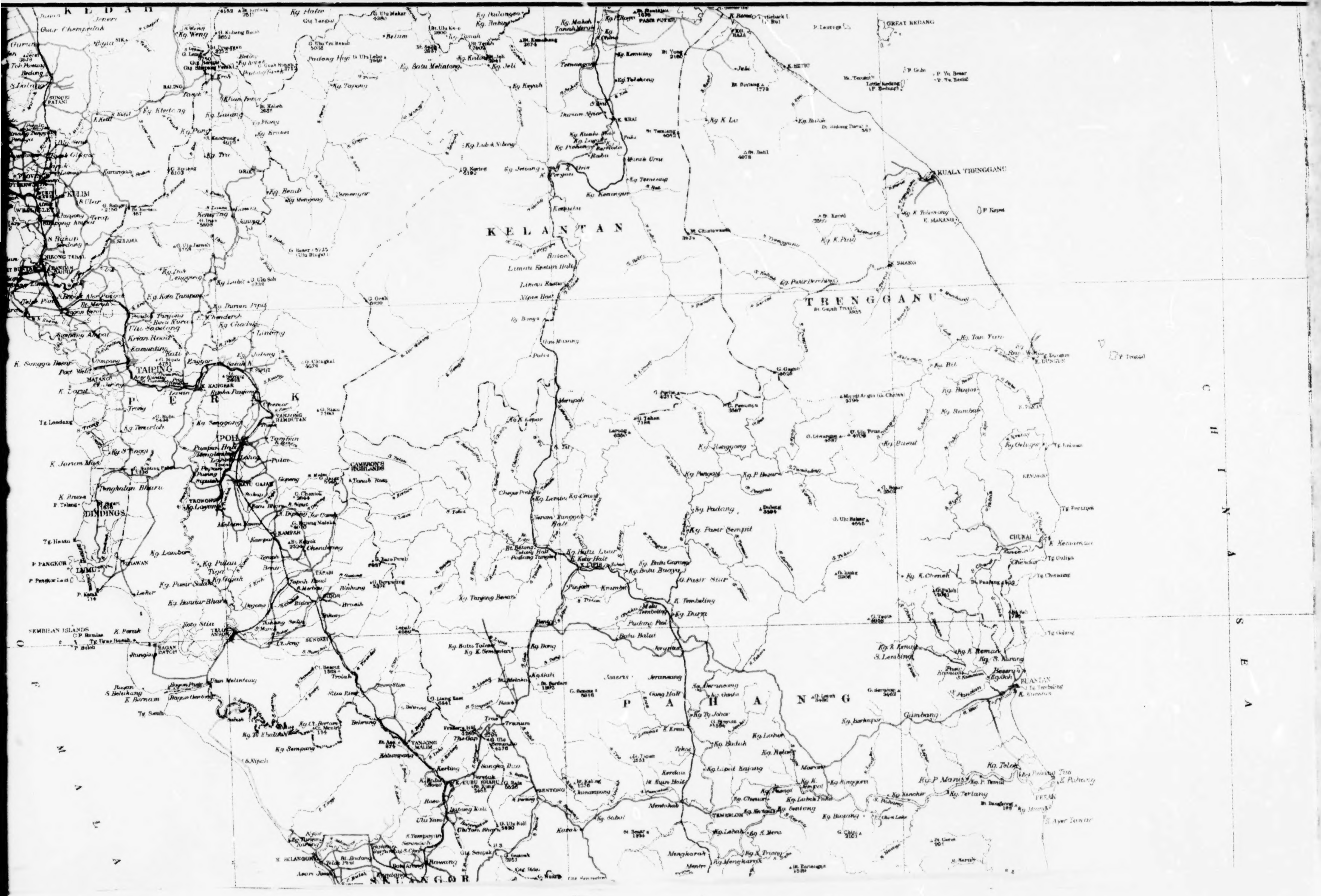
Kg. Chenor
S. Lembing
S T R A I T S O F M A L A C C A
C H I N A S E A


KEDAH
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BAGAN DATOH
CAMERON'S HIGHLANDS
TANJONG MALIM
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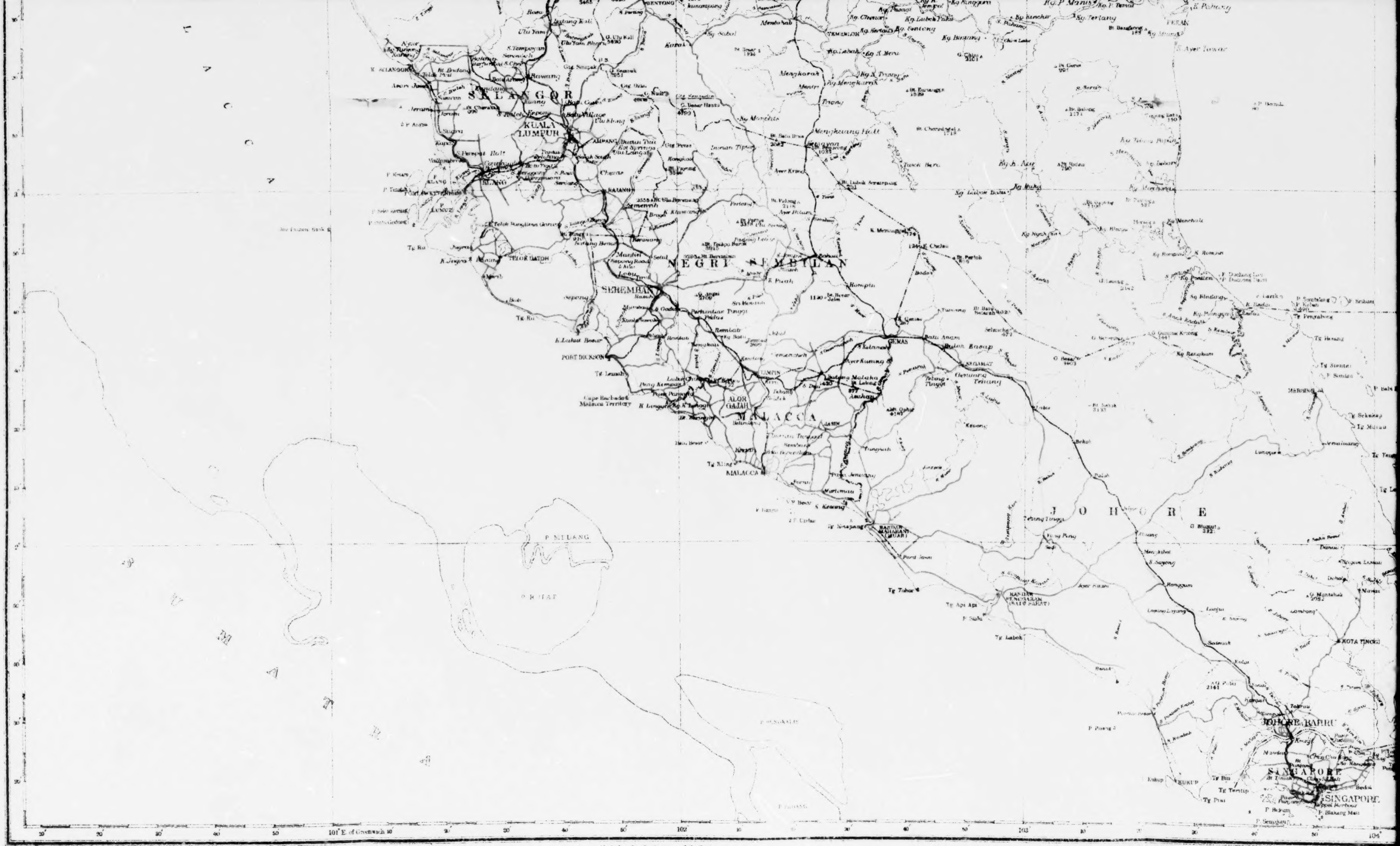
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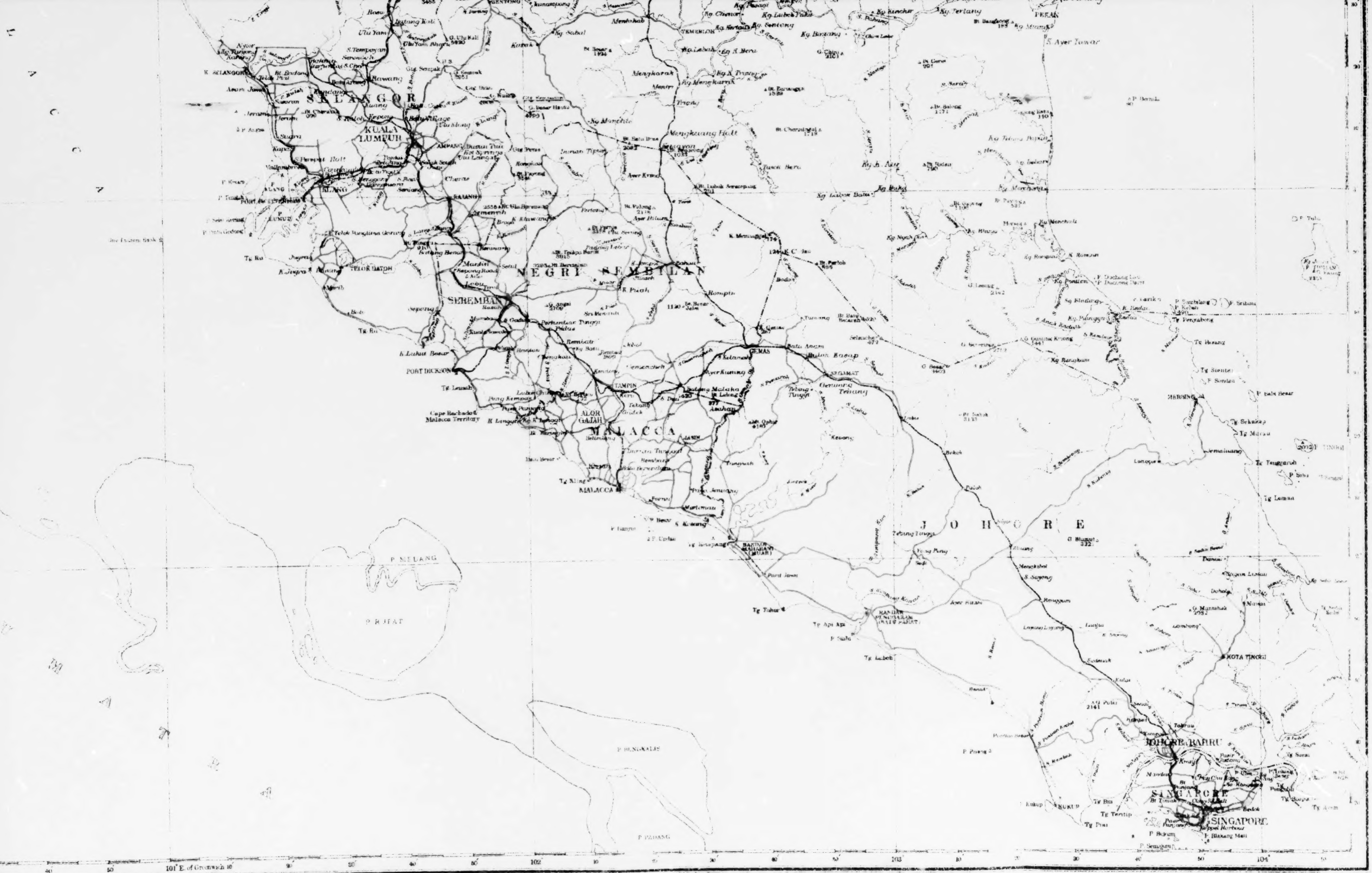
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[*Continued on page iii of cover.*

FEDERATED MALAY STATES.

ANNUAL REPORT

ON THE

SOCIAL AND ECONOMIC PROGRESS OF THE PEOPLE OF THE FEDERATED MALAY STATES

FOR

1933

BY

M. B. SHELLEY, M.C.S.,
Acting Chief Secretary to Government, Federated Malay States.

KUALA LUMPUR:
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CHAPTER I.

Geography, including Climate and History.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

Selangor (3,150 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,550 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D.,

Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungei Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungei Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Tuanku Abdulrahman, K.C.M.G., ibni Al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15°F. at coastal stations and between 15° and 20°F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December,

followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 237 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 110 inches and Cameron Highlands 107 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 55°F. and at Tanah Rata 42°F. or only 10°F. above freezing.

CHAPTER II.

Government.

Constitution of the States.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

The State Council of Negri Sembilan comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undangs, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undangs for amendment or confirmation, and assent is finally given by His Highness and the Undangs. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State. The Federal Council, which was reconstituted in 1927, consisted in 1933 of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President; the Chief Secretary to Government, Federated Malay States; the four British Residents; the Legal Adviser; the Financial Adviser; the Adviser on Medical and Health Services, Malay States; the Controller of Labour; the General Manager for Railways; the Director of Education; the Commissioner of Trade and Customs; the Secretary for Chinese Affairs; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. It still retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 24 districts in each of which there is a Sanitary Board, a Licensing Board, a Health Board and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Health Boards are responsible for health matters in rural districts. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The population of the Federated Malay States on the 30th June, 1933, was estimated to be 1,597,770. In estimating the population for 1933 the method of calculation by geometrical progression has been abandoned in favour of a balancing equation method. The figure thus calculated is reached after making allowance for the excess of births over deaths and the difference between the records of emigration and immigration during the year. The population figures for the four Federated Malay States in relation to the various races, calculated on this basis, have been supplied by the Registrar-General of Statistics, Straits Settlements and Federated Malay States. It is considered that by this means a more accurate estimation of the population is reached in a country such as Malaya which is subject to somewhat sharp fluctuations in respect of the numbers of the non-Malay inhabitants. The total population is swelled by immigration in times of prosperity and shrinks through emigration during a period of economic stress such as has ruled for the past two or three years. Under such variable conditions a population estimated on a basis of geometrical progression may be expected to give fallacious birth and death-rates subject, from year to year, to sharp fluctuations not altogether related to the actual incidence of births and deaths in the area affected.

The population represents :

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.	Total.
Perak	282,445	292,404	129,698	2,209	6,383	713,139
Selangor	128,244	220,718	128,817	2,615	10,241	490,635
Negri Sembilan	90,734	83,492	40,363	807	3,194	218,590
Pahang	114,228	47,506	11,874	357	1,441	175,406
Total	615,651	644,120	310,752	5,988	21,259	1,597,770

BIRTHS.

There were 56,787 births registered during the year, an increase of 1,616 over the total of 55,171 births in the previous year. The increase was distributed fairly evenly throughout the States of Perak, Negri Sembilan and Pahang; Selangor was alone in showing a slight decrease. The increase in the other States was due almost entirely to an increase in the number of Malay births which registered a percentage increase of 9.2.

The birth-rate was 35.5 per mille compared with 31.2 per mille in 1932 and 33.3 per mille in 1931.

Of the total births recorded, 29,689 were males and 27,098 were females thus giving a sex ratio of male births to female births of 110 : 100.

DEATHS.

Thirty-two thousand three hundred and forty deaths were recorded in 1933, an increase of 2,343 over the previous year.

The crude death-rate was 20.2 per mille compared with a crude death-rate of 16.9 per mille in the previous year and 19.1 per mille in 1931. The rate for 1933 shows an increase but part of this increase can be attributed to the change in the method of estimating the population already alluded to. The rate for 1932 probably did not represent the true position in view of the admitted fallacies in the method then employed of estimating the population by geometrical progression.

The death-rate for Malays was 22.00 per mille and proved highest in Perak and lowest in Selangor. The non-Asiatic death-rate showed an appreciable decrease from 3.2 per mille in 1932 to 2.5 per mille in 1933.

Infant Mortality.

The number of deaths of infants under one year of age occurring in each thousand infants born alive was 146 compared with 137 in the previous year. The increase was common to all the Federated Malay States except Pahang. In seeking for a cause for the higher rate of mortality amongst infants the explanation which appears to be most convincing is one associated with the economic stress of the past two years which now appears to be manifesting itself in a lowered vitality of mothers and infants.

A comparison of the infant mortality rates of the following five towns offers an index of health conditions which is derived from known and reliable data.

Infant Deaths per Mille.

	1933.	1932.
Kuala Lumpur	146	133
Ipoh	98	91
Taiping	151	144
Seremban	170	183
Kuala Lipis	129	143

Table I.

Birth-rates in the Federated Malay States According to Races for the Period 1923-1933*, per Mille.

Year.	Malays.	Chinese.	Indians.	All races.
1923	36.0	17.8	20.2	25.3
1924	37.1	21.1	21.9	27.3
1925	36.1	23.3	23.5	28.1
1927	35.9	30.7	23.5	30.5
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	28.6	29.1	31.2
1933	39.3	33.1	34.6	35.5

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

TABLE II.

SUMMARY OF BIRTH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1933.

State.	Malay.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	40.0	30.6	34.2	13.6	50.1	35.1
Selangor	38.9	36.1	36.8	26.4	8.6	36.4
Negri Sembilan	41.9	31.9	30.4	2.5	9.4	35.3
Pahang	35.7	36.0	30.7	—	4.9	35.2
F.M.S.	39.3	33.1	34.6	16.8	21.1	35.5

TABLE III.

DEATH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1923-1933*, PER MILLE.

Year.	Malay.	Chinese.	Indian.	All races.
1923	24.6	23.5	24.9	24.1
1924	24.2	23.3	21.9	23.2
1925	22.6	23.9	22.8	22.9
1927	26.4	34.1	32.9	30.7
1928	24.4	30.6	30.2	28.0
1929	21.8	29.6	23.4	24.6
1930	20.4	30.4	21.8	24.1
1931	18.8	18.9	20.5	19.1
1932	19.1	16.4	15.7	16.9
1933	22.0	19.3	19.7	20.2

TABLE IV.

SUMMARY OF DEATH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1933.

State.	Malay.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	23.6	20.3	21.1	4.1	26.5	21.7
Selangor	19.5	18.8	18.3	1.9	2.8	18.2
Negri Sembilan	22.3	17.4	19.0	1.2	6.3	19.5
Pahang	21.6	19.3	21.7	—	3.5	20.8
F.M.S.	22.0	19.3	19.7	2.5	10.5	20.2

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

Table V.

Summary of Deaths from all Causes at Different Ages in the Federated Malay States according to States for the Year 1933.

State.	Age Group.								Grand total.
	Under 1 year.	1-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	
Perak	3,695	2,805	906	599	1,190	1,401	1,383	3,517	15,496
Selangor	2,542	1,400	399	336	726	895	764	1,874	8,936
Negri Sembilan ...	1,138	681	255	182	348	441	407	815	4,267
Pahang	918	586	203	123	266	355	382	808	3,641
Total ...	8,293	5,472	1,763	1,240	2,530	3,092	2,936	7,014	32,340

Table VI.

Summary of Infant Mortality Rates in the Federated Malay States according to States and Races for the Year 1933. per Thousand Births.

State.	Malay.	Chinese.	Indian.
Perak	159 ...	133 ...	149
Selangor	135 ...	145 ...	148
Negri Sembilan ...	149 ...	155 ...	125
Pahang	154 ...	140 ...	135
Average rate ...	149 ...	143 ...	139

Table VII.

Infant Mortality Rates. All Nationalties, 1933.

State.	Infant deaths.	Births.	Infant mortality rates.
Perak	3,695 ...	25,048 ...	148
Selangor ...	2,542 ...	17,846 ...	142
Negri Sembilan ...	1,138 ...	7,727 ...	147
Pahang	918 ...	6,166 ...	149
F.M.S. ...	8,293 ...	56,787 ...	146

TABLE VIII.

SUMMARY OF INFANT MORTALITY RATES (ALL STATES AND ALL RACES) IN THE FEDERATED MALAY STATES FOR THE PERIOD 1923-1933.*

Year.	Infant mortality rate per mille.
1923	180
1924	181
1925	177
1927	203
1928	182
1929	178
1930	163
1931	139
1932	137
1933	146

CHAPTER IV.

Health.

It is satisfactory to be in a position to record comparatively healthy conditions during 1933 following a year which was itself remarkable for its low sickness rate. The number of admissions to Government hospitals was 76,297 in 1933 compared with 85,978 in 1932. The decline in the hospital admissions during the past two years may be attributed mainly to the large exodus of Chinese and Indian labourers which has been imposed by the severe economic depression. The demand for Chinese labour on tin mines was curtailed still further during 1933 by the application of the tin quota under the International Tin Restriction Agreement. It may be confidently predicted that with a return of even a moderate degree of prosperity and the removal of restriction on the production of tin, the hospitals and their staffs will be called upon to cater for a greater number of sick. With an influx of labourers on a large scale from China and India, the latter with their dependents, the standard of health may be expected to decline and the incidence of disease to increase. Experience supports the belief that many immigrants possess low powers of resistance against some of the communicable diseases prevalent in this country. It may thus be inferred that health statistics compiled for the past two years reflect the double advantage that many decrepit and sub-healthy labourers have left the country and few susceptible immigrants have entered it; and further that these favourable conditions cannot be regarded as permanently established.

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

SUMMARY OF PRINCIPAL CAUSES OF DEATHS IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1933.

State.	CAUSES OF DEATHS.											
	Malaria.	Enteric fever.	Dysentery.	Influenza.	Tuberculosis of respiratory system.	Other forms of tuberculosis.	Leprosy.	Syphilis.	Ankylostomiasis.	Fever (unspecified).	Cancer.	Beri-beri.
Perak ...	668	15	149	8	580	35	3	64	24	6,563	96	49
Selangor ...	266	11	152	27	365	18	...	38	28	2,794	48	97
N. Sembilan ...	196	12	28	19	217	9	...	7	3	1,564	24	51
Pahang ...	83	8	26	8	180	5	...	8	33	1,777	16	57
Total ...	1,213	46	355	62	1,342	67	3	117	88	12,698	184	254

State.	CAUSES OF DEATHS.									
	Diseases of the heart.	Other diseases of circulatory system.	Bronchitis.	Pneumonia (all forms).	Other diseases of respiratory system.	Diarrhoea and enteritis.	Other diseases of digestive system.	Convulsions.	Diseases of nervous system and sense organs.	Non-venereal diseases of genito-urinary system.
Perak	209	84	169	679	253	177	218	1,983	110	131
Selangor ...	164	48	287	486	62	409	150	1,441	80	135
N. Sembilan ...	47	28	173	284	11	139	68	591	21	48
Pahang ...	18	23	13	117	163	104	56	294	23	84
Total ...	438	183	642	1,566	489	829	492	4,309	234	398

State.	CAUSES OF DEATHS.											
	Diseases of pregnancy, child-birth and puerperal state.	Premature birth and diseases of early infancy.	Old age or senility.	Violence (all forms).	Small-pox.	Diphtheria.	Cholera.	Plague.	Cerebro-spinal fever.	Tetanus.	Other causes.	Total.
Perak	279	364	920	276	...	24	...	...	2	67	1,297	15,496
Selangor ...	190	360	648	225	...	23	...	...	...	30	354	8,936
N. Sembilan ...	74	121	258	104	...	7	...	...	1	10	152	4,267
Pahang ...	73	98	134	79	...	3	...	...	1	12	145	3,641
Total ...	616	943	1,960	684	...	57	...	...	4	119	1,948	32,340

PREVAILING DISEASES.

Malaria.—There was an increase in the number of recorded cases of malaria in certain areas. The increase was most marked in Perak where 8,165 patients suffering from malaria were admitted to Government hospitals in 1933 compared with 7,287 so admitted in 1932. There was, however, a decrease in Selangor where 2,940 cases of malaria were admitted to Government hospitals compared with 3,338 admissions in 1932. All cases of malaria admitted to hospital are accurately diagnosed and the number of such cases may therefore be regarded as a more reliable index of the incidence of the disease in the areas served by such hospitals than the number of deaths occurring outside hospital which are returned as due to this cause. During the year an attempt has been made to classify the diseases known generally by the term "demam" to ensure more accurate returns on the part of the untrained Deputy Registrars who certify a large number of the medically unattended deaths occurring in the kampongs. As a substitute for quinine in the treatment of malaria a comparatively new drug known as "Atebrin" has been tried in some districts. Experience in Perak tends to show that its use has reduced to some extent the expenditure on the treatment of malaria and that its extended use may probably result in a diminution of the number of admissions for malaria to hospitals. The recommendation of the Health Organisation of the League of Nations touching a new method of giving quinine was tried in Perak with encouraging results. The anti-malarial measures throughout the country have been maintained as adequately as the need for strict economy permitted. Should evidence accumulate of further recrudescence of malaria in any of the States, increased expenditure on anti-malarial measures may become necessary.

Dysentery and Diarrhoea.—There was a decrease in the number of deaths under these headings in 1933. One thousand one hundred and eighty-four deaths were recorded compared with 1,300 in 1932. The highest rate was in Selangor and the lowest in Perak.

Pneumonia.—One thousand five hundred and sixty-six deaths were recorded as due to pneumonia compared with 2,335 in 1932. The decrease is noteworthy as indicating a possibly increased resistance on the part of the community to one of the widespread and frequently fatal microbic diseases. The explanation may be sought in the exodus of feeble and sub-healthy labourers during the previous two years already alluded to.

Tuberculosis.—Tuberculosis in various forms was responsible for 1,409 deaths compared with 1,627 in 1932. All the deaths which occurred in 1933 except 67 were due to the pulmonary form of the disease which continues to present one of the major health problems facing the Health Department. Five hundred and one of the deaths from pulmonary tuberculosis occurred in urban areas, a fact which suggests the lines on which preventive measures may be most profitably pursued. As the disease is most prevalent in overcrowded areas the chief efforts must be directed to remedying conditions conducing to the crowding of ignorant communities into insanitary dwellings in concentrated areas. Efforts on these lines, coupled with the education of the masses on the elements of healthy home conditions and personal hygiene are engaging constant attention and the following table presents figures which offer encouragement to persist on these lines.

Year.	Deaths from tuberculosis occurring in Government hospitals.	Ratio of deaths from tuberculosis per 100,000 population.
1924	1,037	73.1
1925	1,051	72.6
1926	995	67.4
1927	1,118	74.2
1928	1,074	70.0
1929	1,078	64.4
1930	1,061	61.5
1931	975	56.6
1932	919	51.9
1933	821	51.4

Leprosy.—Sungei Buloh Settlements—There were 1,082 patients at the beginning of the year. This number had grown to 1,104 at the end of the year in spite of the transfer of 100 patients to Pulau Jerejak. The total number of those treated in the settlement during the year amounted to 1,531. The settlement was built to accommodate 880. The need for increased accommodation is therefore manifest and is becoming increasingly pressing. The settlement is rapidly gaining the confidence of the community and the increasing number of applications from lepers for admission and treatment is already a serious embarrassment to the administration faced with the problem of accommodating them. If one may so regard it, a gratifying feature has been the increased admission, for treatment, of Malays. Eight Malays were admitted in 1932; 42 were admitted in 1933. The question of the extension of this and other settlements is receiving serious attention.

Modern treatment has been carried out extensively. Persistent propaganda, improved organisation, and insistence on regularity of treatment by intramuscular and intra-dermal injections of ethyl esters have succeeded in firmly establishing amongst the inmates the popularity and confidence in this form of treatment. It is particularly gratifying to those concerned in treatment to find patients in increasing numbers voluntarily subjecting themselves to treatment by the painful process of intra-dermal injections. The measure of success attained may be gauged by the number of those freed from leprosy. One hundred and fifty-one patients were discharged during 1933 in whom the disease had been arrested, and it was satisfactory to be able to free all these patients without danger to the public.

Kuala Lumpur Leper Asylum—This asylum is used solely for the accommodation of advanced and incurable cases. There were 373 patients at the beginning of the year and 330 at the end. The population is entirely Chinese excepting one Malay on the subordinate staff and one Eurasian. Patients are permitted less freedom than at Sungei Buloh but the patients enjoy certain amenities and discipline is well maintained.

Pulau Pangkor Laut—This leper settlement contains 57 males and 24 females. All are Malays. Treatment is administered once a week by the Deputy Medical Officer, Dindings. Ten patients in whom the disease was arrested were discharged during the year, 14 were transferred to Sungei Buloh and 11 died.

Venereal Diseases.—The number of patients attending the venereal diseases clinics has shown a steady decline during the past few years. The total number of cases of venereal disease treated in the Federated Malay States in each of the last five years was:

1929	40,802
1930	35,734
1931	31,817
1932	24,866
1933	19,394

This satisfactory decline may be attributed to several factors but it is significant that it has been consistent and progressive since the policy of closing the known brothels has been pursued since 1929 onwards. Other factors, which have been found to be coincident with a lessened incidence in other regions cannot, however, be ignored. To mention a few: (*a*) The provision on a large scale of facilities for free treatment which has quickly rendered many cases no longer contagious. (*b*) The economic crisis which has no doubt curtailed the number of visits to brothels. (*c*) The increase in the sex ratio of females to males amongst the Chinese. (*d*) The favourable effect of propaganda. (*e*) The exodus of a large number of labourers many of whom, especially the Chinese, are unmarried and particularly subject to venereal infection.

HOSPITALS AND OTHER MEDICAL INSTITUTIONS.

The following table shows the average daily number of patients in the Government hospitals of each State, the total number of patients admitted during the year, the total number of deaths, and the death-rate per hundred admissions, for the years 1932 and 1933:

State.	Average daily number of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1932.	1933.	1932.	1933.	1932.	1933.	1932.	1933.
Perak	1,582	1,308	44,383	33,579	3,386	2,911	7.62	8.67
Selangor	1,023	976	20,694	20,251	1,825	1,616	8.82	7.97
N. Sembilan	670	694	12,279	13,004	954	912	7.77	7.01
Pahang	400	428	8,622	9,463	583	585	6.73	6.18
Total	3,675	3,406	85,978	76,297	6,748	6,024	7.85	7.89

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries), apart from those treated at special institutions such as infant welfare centres, venereal disease clinics, etc., was 649,765: the corresponding figure for 1932 was 696,838.

INFANT WELFARE CENTRES.

There are six centres, at Kuala Lumpur, Klang, Ipoh, Taiping, Telok Anson and Seremban. The total number of attendances during the year was 182,800 compared with 171,243 in 1932. In addition to the work done at the centres themselves, a very great number of visits were paid by the staff to the homes of the people for the purpose of instruction and assistance in matters connected with maternity and child welfare.

CENTRAL MENTAL HOSPITAL.

The number of patients on the 31st December, 1933, was 2,506. This figure is less by 66 than that of the previous year. The admissions from all sources totalled 798.

Males.		Females.		Total.
577	...	221	...	798

Included in the admissions are patients from Kedah, Perlis and Trengganu.

The most frequent form of mental disorder admitted was confusional insanity with 258 cases. Dementia praecox accounted for 130; mania for 61 and melancholia for 57 admissions.

Six hundred and eight patients were discharged during the year. Three hundred and thirty-six of these had recovered thus giving a recovery rate on the number admitted of 42.15 per cent. This rate compares favourably with the recovery rate in modern mental institutions in Great Britain. The practice of discharging patients as early as possible was continued throughout the year.

Two hundred and thirty-eight patients died. This total is greater by 57 than the previous year. The death-rate was 7.07 per cent.

The general health of the Mental Hospital was good, notwithstanding a higher incidence of malaria in the first half of the year. There were 194 cases of malaria compared with 54 in 1932. The incidence compared with the number of residents is not regarded as alarming but has received due attention.

The farms have been fully occupied and the volume of produce has increased. The pig farm continued to prosper and supplied all the pork required throughout the year with the exception of one week's requirements.

DECREPIT SETTLEMENT.

There were 584 inmates at the beginning of the year and 624 remained at the end. The system of admission was altered during the year. In place of admission by a Magistrate's order a recommendation from the Protector of Chinese was accepted. By this change it has been found easier to make the rate of admission and type of applicant conform to the capacity and policy of the settlement. The discipline of the settlement has been good and employment has been found for the inmates in basket making, clog making and vegetable cultivation.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank-floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

HOUSING OUTSIDE SANITARY BOARD AREAS.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part estate or mine managers and fairly well-to-do Asiatics, but their houses are as a rule of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Production.

MINERALS.

The year 1933 may be recorded as the first in which the mining industry derived any material benefit from the International Tin Control Scheme.

In the first five months of the year there was a rapid rise in the price of the metal from £148 15*s*. per ton on 3rd January to £227 5*s*. on 9th June. The marked increase in American demand together with an increased interest on the Continent quickly improved the statistical position and consequently the price.

The peak of this rise was reached on 9th June when £227 5*s*. per ton was recorded. Thereafter a reaction set in until the beginning of July since when the price remained consistently steady at an average of £220 per ton, the fluctuations being between £211 and £229.

A noticeable feature in the local market was the sudden heavy premia paid for Straits tin during May and June, as much as $10.53 above parity being paid on 10th June compared with an average of about $2 for the remainder of the year.

The international quota throughout the year under review was 33⅓ per cent. of standard tonnage. The increase in world consumption (deliveries) which started in April culminated in August during which 11,800 tons were absorbed. In November and December the consumption figures fell to 7,900 and 7,000 tons respectively. The net effect of the continued control of production and the stimulated demand for tin was a reduction in visible supplies from 45,125 tons at the end of December, 1932 to 23,100 tons at the end of December, 1933. The comparative "carry-over" figures for the same dates were 10,330 tons and 3,341 tons respectively. The details are shown in the following table:

Date.	Visible supplies.	"Carry-over" in S.S.	Total.
	TONS.	TONS.	TONS.
31st December, 1932 ...	45,125 ...	10,330 ...	55,455
,, ,, 1933 ...	23,100 ...	3,341 ...	26,441
	22,025 ...	6,989 ...	29,014

By the end of November the International Pool had released the whole of its holdings of 21,000 tons: 8,000 tons of this amount remained unsold but was included in visible supplies.

The modified Byrne Scheme terminated at the end of June when all tin with the exception of 168.12 tons represented by category "C", surplus held by the smelting companies on account of the Federated Malay States Government, had been released. By the middle of July the balance of 168.12 tons had been released.

The following table gives the prices ruling during the last seven years in dollars per pikul:

	1927.	1928.	1929.	1930.	1931.	1932.	1933.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Highest ...	159.00	131.50	115.50	92.25	71.37½	81.75	124.00
Average ...	144.93	114.18	104.37	72.89	60.29	69.76	99.99
Lowest ...	127.37	103.63½	89.25	54.12½	50.37½	52.87½	71.75
Fluctuation ...	31.63	27.86½	26.25	38.12½	21.00	28.87½	52.25

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows:

	Wolfram.	Scheelite.
1932	Nil ...	302 tons
1933	33 ...	918 ,,

The production of gold was 29,036 ounces compared with 29,296 ounces in 1932.

The Raub-Australian Gold Mining Co. Ltd. produced 26,358 ounces compared with 27,755 ounces in 1932.

Exports amounted to 26,290 ounces.

The production of coal from the Malayan Collieries Ltd., Selangor (the only producer), was 218,247 tons, a decrease of 59,601 tons compared with the previous year.

Consumption was as follows:

	Tons.
Federated Malay States Railways	117,159
Mines	47,566
Other Federated Malay States consumers	17,983
Exported	31,612
Consumed at the Collieries	3,927*
Total	218,247

The total output of coal from the Malayan Collieries Ltd. (Selangor), for the last six years, was as follows:

	Tons.
1928	556,590
1929	661,514
1930	565,573
1931	402,355
1932	277,848
1933	218,247

The labour force engaged in mining (including dulang pass holders) was 51,890 at the end of the year. The figures for the preceding four years were:

1932	53,430
1931	65,777
1930	89,517
1929	113,415

This total does not include labour employed on the extraction and transport of firewood.

The classification of labour was as follows:

Contract	11,346
Wages	24,443
Tribute	6,957
Dulang	9,028
Individual licensees	116
Total	51,890

Contract labour constituted 21.86 per cent. of the total labour force.

The reduction in the labour force was the direct result of tin restriction.

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* Add 16,167 tons of coal consumed from old stock and won during previous years.

AGRICULTURE.

Agriculture shares with mining the position of primary importance in the economy of the Federated Malay States. It is carried on by representatives of practically all nationalities, European and Asiatic, on properties ranging from the small holdings of one-half to five acres owned by Asiatics, to large estates of between five hundred and five thousand acres.

Agricultural crops can be classified in three categories. Those grown both on estates and on small holdings; those grown only on large properties; and those grown exclusively on small holdings by Asiatics. The first category includes the major permanent crops, rubber and coconuts, with which as catch-crops, coffee, bananas, pineapples or tapioca may be grown; it also includes tea, which is in its infancy as an estate crop in Malaya. The second category is confined to oil palms. The third comprises the important rice crop, minor food crops such as maize and ground-nuts, fruit, vegetables, arecanuts and tobacco.

A.—CROPS GROWN BY EUROPEANS AND ASIATICS.

Rubber.—The total area under rubber in the Federated Malay States at the end of the year 1933 was estimated to be 1,517,740 acres.

The distribution of areas is shown below:

	Holdings of 100 acres and over.	Holdings of under 100 acres.	Total.	Increase or decrease compared with 1932.
Perak	270,744 ...	251,757 ...	522,501	...+ 2,875
Selangor	342,256 ...	155,520 ...	497,776	...+10,514
Negri Sembilan ...	273,773 ...	82,159 ...	355,932	...+ 527
Pahang	65,267 ...	76,264 ...	141,531	...+ 5,774
	952,040 ...	565,700 ...	1,517,740	...+19,690

The area planted with budded rubber in these States amounted to 88,780 acres of which 22,309 acres were tappable and 5,812 acres were actually in tapping during the year.

The production of rubber in the year was 248,211 tons. Comparative figures for 1931, 1932 and 1933 are:

	Estates of 100 acres and over. TONS.	Estates of less than 100 acres. TONS.
1931	141,457 ...	105,378
1932	140,525 ...	93,371
1933	137,363 ...	110,848

This table shows that the increased production in 1933 was obtained entirely from small properties under the influence of the rise in price after the first quarter of the year. It also clearly shows how much more directly and rapidly rubber production from such holdings is influenced by fluctuations in price about a critical low figure than is the output from large estates.

Almost all the rubber produced was exported since the total consumption in the whole of Malaya for 1933 was only 2,878 tons.

In accordance with the decision reached in 1930 no fresh alienation of land for rubber planting was made in 1933 and in consequence any addition to the planted area was made on land already alienated. The areas of such new plantings in the Federated Malay States are estimated to be as follows:

	Estates of 100 acres and over.	Estates of under 100 acres.	Total.
Perak	1,573	555	2,128
Selangor	662	395	1,057
Negri Sembilan	444	860	1,304
Pahang	1,508	291	1,799
Total	4,187	2,101	6,288

During the year, an area of 1,755 acres of planted rubber was destroyed or abandoned on estates of 100 acres and over.

Rubber Area out of Tapping.—The area partly out of tapping on estates amounted to approximately 100,000 acres throughout the year. The area entirely untapped on estates decreased from some 63,000 acres in March to about 24,000 acres in December. Rough estimates of the total area of small holdings untapped indicated that, whereas in December, 1932, some 79,000 acres or about 15.5 per cent. of the total tappable area were untapped, this area increased to about 133,000 acres or 26 per cent. in March, 1933, decreased rapidly to 56,000 acres or 10.7 per cent. in June and finally fell to 45,000 acres in December when it represented 8.6 per cent. of the total tappable area of 525,732 acres.

Conditions of Estates.—While the improved price of the commodity enabled the owners of large properties, with the aid of the strictest economy, to avoid loss or to obtain a small profit, there was little change in measures for maintenance and disease control. The number of estates following the policy of encouraging the development of selected forms of undergrowth showed an increase.

Small Holdings.—The better price in the second half of the year resulted in considerable improvement in the general condition of small holdings. The investigations into the questions of tapping practice, yields and bark reserves on small holdings were completed during the year. The conclusions reached were that while the average yield on the holdings under observation was 479 lbs. per acre per annum, nevertheless the amount of bark removed in tapping was not excessive. It was found that about 1/5th of the trees were always out of tapping, an observation which helped to account for the fact that the bark reserves on the trees at the end of the investigation were considered sufficient on an average to permit of tapping for the next 7½ years without allowing for any bark renewal. Higher prices in the second half of the year did not on the whole materially affect the severity of tapping.

Diseases.—Mouldy rot disease of the renewing bark continued to be troublesome on small holdings, especially during wet weather. Small holders were still unable to afford the cost of effective control measures. Steps were, however, taken to render available supplies of a cheap and efficient disinfectant at cost price through village headmen and local Agricultural Officers, since it was found that fairly frequent paintings with this disinfectant would reduce to a minimum the damage caused by the disease. This measure met with a satisfactory response.

Leaf mildew was not of serious importance though it appeared over a fairly wide area in Negri Sembilan in the early part of the year.

Coconuts and Coconut Products.—As a few coconut trees are planted on almost every small holding, it is almost impossible to form even a rough estimate of the total production of coconuts in the Federated Malay States. Copra production is for the most part limited to the well-defined blocks of estates and small holdings in the coastal districts of the States of Perak and Selangor, though some is also made on the east coast of Pahang. The nuts grown in the inland districts are all consumed fresh, deficiencies in some inland districts being met from the excess production in other areas, the trade being mainly from the coast inland.

In the three western States no important changes in the area planted with coconuts have occurred since the close census was made in 1930. In Pahang, however, a revision of this census indicates an increase of some 400 acres on the 1930 Estimates, so that the estimated acreage is now as follows:

State.	Acres.
Perak	108,940
Selangor	110,584
Negri Sembilan	5,966
Pahang	14,918
	240,408

Prices for coconut products were further adversely affected by prevailing conditions in the world's markets for animal and vegetable oils and fats, the price of copra falling at the end of the year to about $3 per pikul, the lowest on record. Estate crops are used almost entirely for the production of copra for export, but some of the copra obtained from small holdings is converted into oil for local consumption and for export. The steady increase in the quantity of oil locally produced and exported during recent years became more marked in 1933, apparently as a result of the low price for copra which rendered the cost of freight on the more bulky product an item deserving of careful consideration.

The total production of copra in the Federated Malay States is not known, since there is no machinery for ascertaining the quantity used for the local production of oil. Net exports of copra from the Federation amounted to 86,522 tons, an increase of some 12,500 tons over the figure for 1932.

The tendency among Malays to manufacture copra themselves in preference to selling nuts to middlemen has extended considerably. The efforts, to which reference was made last year, to encourage the production of copra of good quality by individuals or groups of small holders using kilns of the improved type have been extended to new localities and have met with a further measure of success. The quantity of good copra produced by small holders still represents, however, a quite small proportion of the total output. Much further instruction work in the preparation of good copra and the organisation of group working is needed before the movement in this direction can become stabilised, while careful exploration of the best marketing channels is recognised as an essential adjunct.

It has now been proved that the preparation of good quality copra will, under normal marketing conditions, yield a return higher than that obtained from the sale of a corresponding number of nuts or of a corresponding quantity of inferior wet copra. This difference in return, small though it may appear, is of relatively greater advantage to small holders when prices are low than it is in times of prosperity.

Research work was instituted during the latter part of the year on causes underlying the poor yields obtained from certain areas of palms, for which no obvious explanation could be given.

Pineapples.—The area planted with pineapples again increased, being 9,789 acres as compared with 8,830 acres in 1932 and 6,292 acres in 1931. By the addition of nearly 700 acres the area in Selangor was brought up to 7,618 acres.

Of the two pineapple factories in Selangor (the only two in the Federated Malay States) which are both under the same Chinese ownership, one was closed down at the end of the year.

The average prices of canned pineapples for 1933 showed, as anticipated, a further decline. For a case of 48 tins (72 lbs. of fruit) they were: Cubes $3.11, sliced flat $3, sliced tall $3.19.

Investigations were continued into the cultivation and manuring of pineapples when grown as a main crop. In Selangor no conclusive results were obtained, although at the Pineapple Station in Singapore Island on a somewhat exhausted soil, where the yields from the unmanured plots were exceedingly low, it was found that the use of fertilisers and of certain forms of mulch gave marked increases in the yield of fruit.

Work on the selection and improvement of the variety commonly used for canning was commenced together with a botanical survey of the characters of different varieties.

An experimental consignment of canned pineapple graded by the department was sent to the Canadian Exhibition at Toronto and received favourable comment. Further trial consignments of graded fruit are being prepared for despatch to England.

Legislation designed to give effect to the recommendations of the Pineapple Conference, appointed by His Excellency the High Commissioner in 1930, was fully discussed with representatives of the industry. A Bill embodying the results of these discussions was under consideration by the Legislative Council in the Colony and a similar Bill was in preparation in Selangor at the end of the year.

These different lines of action taken by the Government are intended to assist in stabilising the pineapple industry and in preparing it to meet competition which must be expected from various quarters in the near future.

Coffee.—Singapore prices for coffee declined steadily during the year and offered no inducement to extension of the planted area. In the Federated Malay States, however, this increased by some 600 acres to 9,385 acres of which about 6,000 acres were in Selangor.

In the latter State steps taken to assist Malays to prepare berry of reasonably good quality, in preference to selling berry to middlemen, met with some success, but difficulty was experienced in finding any buyer who would give an enhanced price for this improved product. It is, however, evident that with a little care in preparation a lowland coffee can be produced which is of sufficiently good quality to meet much of the local demand.

On Cameron Highlands interest in the planting of certain strains of Arabian coffee was continued and further consignments of seed were imported from India and Jamaica. The total area now planted is estimated at 260 acres and there were several good nurseries of young plants to provide for further extensions.

The coffee berry borer proved troublesome in some localities in the lowlands, more especially as the price of the commodity was so low as to leave little, if any, margin for the cost of control measures.

Tea.—The total area planted with tea in the Federated Malay States showed a small increase to 1,786 acres of which 684 acres were in the vicinity of Cameron Highlands. There were four estates in the lowlands of which two were producing black tea for local consumption. On the Chinese-owned small holdings a green tea of low quality was made which sold at prices varying from 40 to 60 cents per lb. The local price for black tea was 55 to 60 cents per lb.

Samples of upland tea from the Tanah Rata Experiment Station, Cameron Highlands, were sent at regular intervals to London for reports and valuations. These showed that the tea was of satisfactory quality and could be classed with medium Ceylon teas. Samples of lowland tea from the Central Experiment Station, Serdang, were sent in July and proved to be of only slightly less value, ranking with common Ceylon teas. A commercial consignment of upland tea consisting of 111 half chests of tea of all the five grades made at the Tanah Rata Experiment Station was sent to London and sold on the open market in the last quarter of the year. The price realised averaged 1*s*. 1½*d*. per lb. and confirmed the previous valuations. The consignment was well received and obtained a favourable report.

At both the Government Experiment Stations experiments are in progress on pruning and manuring of tea.

Two root diseases of tea have been recorded fairly generally. Insect pests have included white ants, mosquito blight and purple mite. None of these have, however, attained serious proportions.

B.—CROPS GROWN ENTIRELY ON LARGE ESTATES.

Oil Palms.—The total area planted with oil palms at the end of 1933 was returned as follows:

	Acres.
Perak	17,426
Selangor	13,505
Negri Sembilan	1,199
Pahang	788
	32,918

This represents an increase of 270 acres in the year divided between all the States except Pahang.

All oil and kernels produced are exported, with the exception of a small demand for oil for the local manufacture of soap. Production of oil increased by over 2,000 tons to about 9,300 tons and that of kernels rose by some 400 tons to 1,600 tons. The price of palm oil however showed a further decline under the same influences as affected the price of coconut oil. The average price for the year was £16 0*s*. 3*d*. as compared with £17 16*s*. 9*d*. per ton in 1932.

Investigations on manuring, artificial pollination, manufacturing processes and disease were continued during the year.

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—The estimated area of rice land and the yield of padi to the nearest 1,000 gantangs (686 gantangs of padi being taken to be equivalent to one ton of rice) for the season 1932-33 were as follows:

	Wet.		Dry.		Total.	
	Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
Perak ...	88,620	24,330,000	18,350	2,927,000	106,970	27,257,000
Selangor ...	25,010	4,936,000	3,800	412,000	28,810	5,348,000
N. Sembilan	33,930	9,948,000	460	52,000	34,390	10,000,000
Pahang ...	39,690	7,876,000	4,300	356,000	43,990	8,232,000
Total ...	187,250	47,090,000	26,910	3,747,000	214,160	50,837,000

The planted area and the crop harvested during 1933 both surpassed the record established in the previous season, the former showing an increase of about 19,600 acres and the latter a rise of some 5,800,000 gantangs of padi or approximately 8,000 tons of rice.

The increase in crop was due both to expansion of the planted area and to a rise in the average yield of wet padi per acre which was 251 gantangs in 1933 as compared with 245 in 1932. The favourable weather conditions experienced throughout all the chief padi areas were in the main responsible for the high yields obtained, but it is worthy of note that throughout Malaya as a whole the average yield per acre during the last three years has been 260 gantangs as compared with an average yield of 207 gantangs during the preceding nine years and a previous maximum yield of 243 gantangs per acre in 1925. It would seem, therefore, that the rise in yield per acre during the last three years is not attributable only to weather conditions, but is partly due to other factors such as improved cultivation, the wider use of high yielding pedigree strains of padi, and the increased attention paid to the crop by cultivators.

There is every prospect of a good crop for the season 1933-34 in the Krian district of Perak where some 48,000 acres were planted. A satisfactory crop was harvested in Pahang at the close of the year in time to escape the ever present danger of floods at harvest; the planted area, however, showed some reduction owing to dry weather in the initial stages. Elsewhere weather conditions have rendered crop prospects somewhat uncertain.

Investigations on padi carried out during the year comprised the further selection and testing of pure strains, cultivation and manurial experiments and further work on padi soils.

In several parts of the country rats appeared to be more numerous than usual judging by the damage inflicted on the growing crop. In Krian, however, systematic control measures were continued under official supervision and losses were reduced to negligible proportions. No other pests were more than usually in evidence.

Tobacco.—Interest in the cultivation of tobacco was maintained, but there was little change in the quality of the product which is used entirely for local consumption by the poorer classes of the community, either in the form of cheroots, or cut for use in pipes and cigarettes.

As explained in the last report the planted area is difficult to estimate. At the close of 1933 some 2,000 acres were under this cultivation, of which 1,600 acres were in Perak where the crop is grown extensively by Chinese market gardeners in rotation with vegetables. Malays also undertake the cultivation of this crop, but to a much smaller extent than the Chinese. The price obtained for sun-cured leaf varied from $22 to $58 per pikul in different localities and at different times during the year.

Experiments in flue-curing for the preparation of yellow leaf at the Pineapple Experiment Station in Singapore met with some success during the dry season, but gave disappointing results in the wet weather at the end of the year. It is becoming evident that careful attention will have to be given to planting at such times that the leaf will ripen and be harvested during the two dry seasons, if the object is to produce yellow cigarette tobacco. The use of suitable fertilisers also appears to be a factor of importance.

Several well-known pests and diseases of this crop have made their appearance, notably stem-boring and leaf-eating caterpillars. For a few of these, such as the leaf-eating caterpillars, control measures have been devised; others are under investigation.

Derris.—Important research work on the insecticidal properties of different species of derris (tuba) root was in progress during the year. There is an increasing interest in this crop, both locally on the part of growers and in other countries among manufacturers of insecticides. At the end of the year a greater demand for the root occasioned a well-marked rise in price.

Fruit.—There has been a considerable enquiry for planting material of fruit trees of known quality, more especially in the State of Pahang. Arrangements have been made to meet this need by building up stocks of material obtained by vegetative methods of reproduction at the Central Experiment Station, Serdang, and the local agricultural stations. In this connection the success obtained at Serdang with the etiolation method of vegetative reproduction, as practised at East Malling in England, affords ground for hoping that this method will be of value as an aid to maintaining adequate supplies of young fruit trees of several different kinds.

Ground-nuts.—The imposition of an import tax on ground-nut oil, which is extensively used for cooking purposes, has resulted in the erection of some four or five oil mills in the Federated Malay States. These rely mainly on imported supplies of nuts, but the possibility of extending local cultivation is receiving attention, more especially since it seems possible that this crop may be grown successfully on worked out mining land, while it is also useful as a rotation or as a catch crop.

Arecanuts.—Another minor industry that has been under examination is the preparation of split or sliced and dried arecanuts from the fruits produced on the scattered palms to be seen growing near almost every Malay dwelling. It has been found that improvement is needed both in methods of preparation and of marketing and work is in progress with a view to meeting these requirements.

General.—The Department of Agriculture maintained its instruction work through the usual channels, namely, local agricultural stations and padi test plots, routine inspection of school gardens, and tours of the rural lecture caravan which is maintained jointly with the Department of Co-operation and the Rubber Research Institute.

During the year District Economic Boards were established in a number of centres for the purpose of bringing the leaders of the peasantry into close contact with the various technical officers who are able to render them assistance and advice in dealing with local problems. Meetings held under the chairmanship of the various District Officers were attended by the local Agricultural Officers. These meetings brought to light a number of matters of interest and afforded useful opportunities for discussion.

The Malayan Agri-Horticultural Association held its tenth exhibition in Kuala Lumpur at the beginning of August and four successful district shows were held in the State of Selangor.

The School of Agriculture, Malaya, began definitely to prove its value. The number of students present at the opening of the new school year in May was 53, as compared with 30 at the close of the preceding year.

In the Federated Malay States twelve Government scholarships to this school have been established (as an alternative to definite recruiting for Government service). Avenues of employment for passed pupils of the school other than in Government service have begun to present themselves and it is anticipated that suitable posts will easily be found for the 24 students who will complete their training in April, 1934.

The *Malayan Agricultural Journal* in English was published monthly and journals in the Malay and Chinese languages were issued quarterly. In addition ten special bulletins on general or scientific subjects were issued and leaflets in English and Malay were prepared and published as required.

LIVE STOCK.

In addition to performing its function of supplying milk, vegetables and eggs to visitors to Fraser's Hill, the Government dairy provided some 21 animals for breeding purposes. The revenue collected from the sale of produce showed a slight excess over expenditure on upkeep.

The milk supplied from the Fraser's Hill Dairy as well as that from the Stock Farm, Serdang, was regularly examined by the Institute of Medical Research and found to be equivalent in standard to that of certified milk in England. Revenue from the Serdang Dairy and Stock Farm also exceeded expenditure on upkeep. The policy of establishing a cross-bred herd from the Friesian and Montgomery cattle was continued. The herd of pigs was maintained and thirty-eight animals, of which the great majority were pure bred, were sold for breeding purposes.

Chemical investigations and manurial experiments on fodders were continued.

It has been found that crossing imported pure-bred boars with the local sows of Chinese type results in the production of an animal which combines many of the desirable characters of the boar, especially greater size and more rapid growth, with the hardiness of the local type. These cross-bred animals are becoming popular among Chinese pig-breeders and market gardeners and are rapidly replacing the local breed in some areas. In the State of Selangor alone there were believed to be some 4,000 cross-bred pigs at the close of the year.

In the second half of the year a Poultry Instructor was appointed for work in the States of Selangor and Negri Sembilan. He organised a number of meetings in the villages at which talks on poultry management were given and models of suitable poultry houses, easily constructed from materials within the reach of any peasant, were displayed. These meetings were well attended and appreciated. They have already begun to produce some improvement in the village methods of poultry keeping.

Veterinary supervision of live stock has prevented the introduction and spread of infectious diseases likely to cause serious losses, and the quarantine stations continue to serve their very useful purpose. This work, however, is carried out with some anxiety owing to the absence of suitable veterinary control in places outside the Federated Malay States from or through which stock are imported.

The buffalo farm at Raub has been further developed and valuable observations on buffalo breeding have been made at this farm and throughout the State. The institution of district buffalo shows in the Raub district has met with considerable success, and owners have shown a keen interest in the work which is being done, and which, it is hoped, will be extended in the State. The increase of buffaloes in Pahang in 1933 is given at 2,000 head.

Cattle, sheep and goat breeding has remained stationary, but the possibility of development on lines suitable to the conditions obtaining in the districts is receiving attention.

A wide interest continues to be taken in pig and poultry breeding in which there is ample scope for further development.

Veterinary research work directed towards the elucidation of problems which have prevented the development of the live stock industry is in progress and extension of this work is urgently required.

The following table gives the live stock census during the year:

—	Cattle.	Buffaloes.	Sheep and goats.	Pigs.	Dogs.	Horses.
Perak	21,931	13,440	33,377	38,194	12,062	227
Selangor... ...	11,769	2,527	20,205	59,966	8,673	52
N. Sembilan ...	7,780	12,718	23,267	30,056	3,965	27
Pahang	4,654	18,289	16,967	13,972	1,639	55
Totals, 1933 ...	46,134	46,974	93,816	142,188	26,339	361
Approx. value in $	1,384,020	1,878,960	938,160	2,132,820	...	180,500

The following return shows the imports into Malaya of meat and animal products during the year.

Articles.	How counted.	Quantity.	Value in $.
Cattle	Nos.	25,730	1,153,974
Swine	,,	153,050	2,560,143
Sheep	,,	47,126	346,207
Goats	,,	4,146	41,888
Milk (condensed, etc.)	Cases	897,944	6,140,093
Butter	Cwts.	14,152	609,910
Ghee	Tons	677	565,331
Lard	,,	647	182,953
Eggs, fresh and salted	Per hundred	227,568	363,280
Poultry—			
(*a*) Alive	Nos.	858,631	516,630
(*b*) Dead	Tons	46	46,487
Meat—			
(*a*) Beef, frozen, salted, etc.	,,	950	357,212
(*b*) Mutton and lamb, frozen	,,	465	196,741
Pig products—			
(*a*) Bacon and hams	,,	276	275,483
(*b*) Pork, fresh, frozen and salted	,,	110	80,240

Buffaloes numbering 8,266 and cattle 3,600 were imported into the Federated Malay States during the year.

FORESTS.

If rubber is regarded as a forest crop—and its cultivation is being increasingly recognized as a form of forestry—approximately 93 per cent. of the land surface of the Federated Malay States is under forest of some sort, and the policy followed with regard to forests generally has therefore a certain importance from the standpoint of the community at large. Extensive areas of the natural forests of the country are of course inaccessible at present and for that reason unproductive, but accessibility is a relative term and in the course of time, as transport facilities are extended, it should be possible to put a substantial proportion of these to appropriate productive use. Meanwhile the forests perform a valuable function in preventing erosion and floods and preserving soil fertility: an important matter in the tropics, where many soils owe such fertility as they possess mainly to the natural vegetation they support.

It has been the policy of the Government to set aside an adequate proportion of the forest area for permanent timber production, and in the forest reserves, as they are called, cutting is strictly regulated in accordance with conservative principles. The working of the State land forests, which are destined ultimately for alienation, is subject to less drastic restrictions, but the giving out of very large areas for unrestricted cutting involving not only the destruction of the forest but, unless the forest growth is to be replaced immediately by some other crop, the degradation of the soil as well, is not regarded favourably.

The regeneration of the natural forest growth in the reserves, as it is removed by timber cutters, by new and more valuable forest crops under regulated management, is a Government enterprise and constitutes the chief business of the Forest Department, being carried on by the agency of a trained staff consisting mainly of Malays. All timber is sold standing, and the business of its conversion and extraction is carried on almost entirely by Chinese contractors and Chinese labour. The same applies generally to the collection of minor forest produce.

The sawmill industry in the Federated Malay States is not so highly developed as in the south of the peninsula, where relatively easy transport conditions and the demand of a large centre of consumption like Singapore have been stimulating factors; but with the recent revival of the timber trade and the encouragement and technical aid afforded by the Forest Department, it is now showing definite signs of expansion. The Telok Anson group of mills, and the mill at Enggor, have been reasonably prosperous of late : a small but active unit has been installed at the terminus of the tramway in the Parit forest reserve; and another small sawmill has recently reopened at Kampong Ijok after having been closed since 1930. This last mill is exceptional in the peninsula in that several Malays are employed on operation and logging work. Two new mills are projected in Perak at Sungei Siput and at Degong in Batang Padang district, and one in Selangor at Batang Kali. The Pahang sawmills are still in difficulties owing to the combined effect of the low price of timber and the high costs of its transportation to market.

Production for export remains backward, mainly owing to the disadvantages under which the mills labour in the matter of ocean freight charges as compared with their competitors in the south. The Telok Anson mills are well equipped in the matter of plant to cut for export, and the fact that they have not been able to do so to any material extent is due partly to the unsuitability of much of their raw material. Moreover, with the low prices still ruling in the United Kingdom market, the local trade, now that demand is becoming more active, has greater attractions for them. Experimental cutting for the

Home market has however been initiated at the Enggor mill, and one or two of the Pahang mills continue their endeavours in that field.

The production of hand-sawn *keruing* flitches for export continues in Selangor and Negri Sembilan and while this trade is still on a small scale it seems to offer decided possibilities, more particularly as *keruing* has never been a favourite on the local market and accessible supplies of it are consequently abundant. The aggregate quantity of material of this class shipped from the Federated Malay States, Malacca and Johore during 1933 was 1,900 cubic feet, valued on landing in the United Kingdom at about £285.

To be seen in proper perspective the movement to market Malayan timbers overseas must be regarded from the standpoint of Malaya as a whole. The total quantities shipped, since the first experimental consignment was sent about the middle of 1932, have been 16,000 cubic feet, valued c.i.f. at about £2,400, and at the end of 1933 a further quantity of 5,200 cubic feet was undergoing seasoning preparatory to shipment. Towards the end of the year the demand fell away somewhat owing to the disturbing effect on the hardwood market of the monetary policy of the United States but there are hopes of an early recovery. Meanwhile most of the major technical difficulties of production have been overcome, and the industry has shown itself capable of turning out certain "lines" of material in quantity given reasonably favourable conditions as regards price and transport cost. High shipping freights, which inhibit trade in any but the most select grades of material, remain the chief factor limiting expansion.

The Federated Malay States as a whole are self-supporting in the matter of timber supplies, Selangor being the only State that, owing to the depletion of its forests, has to depend to some extent on sources of supply outside its boundaries. There is in fact a substantial surplus for export, though owing to exceptionally depressed conditions the nett value, after deducting that of imports, of timber, firewood and charcoal exported fell to $456,052 in 1933.

The area of reserves at the close of the year was 7,352 square miles, and an additional area of 53 square miles was proposed for reservation. The process of reservation is practically complete in the western States, but might still be extended with advantage in Pahang, the forests of which State are likely to be drawn on in future for the supply of the rest of the Peninsula to a much greater extent than they are now.

A marked upward trend in forest revenue during the latter part of the year was insufficient to prevent a further fall in the amount realised to $626,343, as compared with $648,336 for the previous year. The improvement in revenue shows every sign of continuing.

The outturn of timber, firewood and charcoal during the year, expressed in solid cubic feet, amounted to 5,103,012, 6,650,438 and 802,131, representing increases of 541,775 and 38,268 in timber and charcoal and a decrease of 697,849 in firewood. The charcoal industry in the Matang mangrove forests is developing steadily and it is hoped that supplies from that source will eventually displace Siamese imports in the north.

The extent to which depletion of State land resources has proceeded in each State may be inferred from the percentage of the total outturn of timber and fuel derived from forest reserves, which is 69 for Selangor, 55 for Perak, 33 for Negri Sembilan and 8 for Pahang.

There was again a decline in the revenue from minor produce. The results of departmental *damar* operations, however, showed an improvement, a profit of $2,674 having been made on the year's working. Revenue from *jelutong* declined further, mainly owing to the falling price of this product, which is assessed to royalty on an *ad valorem* basis: the decline in output was slight.

The tramways constructed in Parit and Kroh reserves continued in operation, and had a marked effect in stimulating output, of which the installation of a small sawmill at the terminus of the former line is evidence. The tramway in Kroh reserve was extended during the year, mainly by Malay relief labour: its function is to tap a large area of previously inaccessible forest in order to provide a cheap supply of firewood for the Kampar dredges. A departmental lorry road in the same reserve was similarly extended, and part of the Chikus reserve was opened up for working by the clearance of the Sungei Chikus as a floating stream, which it is planned to use for conveyance of raw material to the new mill at Degong. A project for extraction of timber by an aerial gravity ropeway constructed in Kledang-Sayong reserve was successfully completed by the close of the year.

The Timber Purchase Section, which functions as an agency for buying timber on behalf of Government departments and private consumers, purchased material to the value of $325,095, as compared with $254,787 during the previous year.

Research on forest products, botany, wood technology and silviculture was carried on at the Forest Research Institute, Kepong, and the testing and preservative treatment of timber continued to be the subject of investigations at the Timber Research Laboratory, Sentul. No new Malayan Forest Record was published during the year, but a number of papers dealing with the results of research appeared in *The Malayan Forester* and other periodicals, and Malay text-books on surveying and timber identification for use at the training school for forest subordinates were completed.

FISHERIES.

The total weight of "wet" fish landed in the Federated Malay States amounted to 47,798,664 katies or approximately 28,452 tons.

This catch valued at an estimated price of 5 cents per kati amounted to $2,389,933.

Prices remained low throughout the year, and the season appeared to have been quite normal in spite of the heavy rainfall during the year.

No sustained scientific observations have, however, been possible owing to lack of trained staff to undertake these duties, and no specific information concerning the seasonal appearance and disappearance of the more important fish, crabs, prawns and those factors which influence them, is yet available.

The total revenue from fishing licences amounted to $10,896: from fishing boat licences $2,380. The revenue from fishing licences showed an increase of $612, and from fishing boat licences a decrease of $136.

Some experimental oyster laying was tried at Kuala Selangor but results are not satisfactory. The cause will not be known until detailed investigations have been made on the spot. The oysters in the Perak River, which until recently showed signs of becoming exhausted, have shown a marked increase as a result of the laying already carried out, and the closer supervision which is now exercised.

The total number of full time fishermen employed in the Federated Malay States amounted to 10,179, of which total 5,644 were Malays, 4,528 were Chinese, with 7 others.

MANUFACTURES.

There are but few manufacturing concerns in the Federated Malay States. They include four aerated water factories, two match factories, five distilleries, one plywood factory, two pineapple canning factories, one cement works, and a few tile and brick factories.

CHAPTER VII.

Commerce.

The aggregate declared value of the imports, exports and re-exports for the year 1933 amounted to $179,015,085, an increase of $20,030,503, or 13 per cent., as compared with the year 1932.

This satisfactory increase was due entirely to the increase in the prices of rubber and tin.

The price of tin varied from $71.75 to $124 with an average of $99.81 per pikul in 1933 as against $69.73 per pikul in 1932.

The price of rubber varied from 5.9 cents to 14.6 cents with an average of 10.2 cents per pound in 1933 as against 7.1 cents per pound in 1932.

The price of copra varied from $5.60 to $3.05 and the average price for the year was $3.94 per pikul only as against $5.76 per pikul in 1932.

The total value of the imports, exports and re-exports, including bullion and parcel post, for the last six years are as follows :

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1928	191,473,471	278,523,482	87,050,011
1929	201,393,405	349,012,595	147,619,190
1930	168,020,418	213,652,044	45,631,626
1931	106,201,211	125,177,183	18,975,972
1932	71,133,301	87,851,281	16,717,980
1933	67,129,150	111,885,935	44,756,785

and while the balance for 1933, when compared with the two previous years, may be considered extremely satisfactory, it is due primarily to the improvement in the prices of tin and rubber. secondly to further falls in the prices of many of the commodities imported, such as cement, piece-goods and sarongs of cotton, silk and artificial silk, cycle parts, etc., and thirdly to the fact that the resulting increase in the purchasing power of the Federation has been reflected to a slight extent only in the value of the total imports, as is shown by the quarterly figures given below:

Merchandise, Parcel Post, Bullion and Specie.

	Imports.	Exports.	Re-exports.	Total.
	$	$	$	$
1st quarter, 1933	15,144,212	18,858,954	1,039,187	35,042,353
2nd ,,	16,195,869	23,346,288	920,509	40,462,666
3rd ,,	17,607,091	32,315,856	1,005,250	50,928,197
4th ,,	18,181,978	33,427,361	972,530	52,581,869
	67,129,150	107,948,459	3,937,476	179,015,085

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years is as follows:

Imports.

Countries from which imported.	1931.	1932.	1933.
Singapore	34.72	34.12	32.78
Penang	17.27	19.16	18.24
Malacca	2.79	2.78	2.36
Unfederated Malay States	1.58	2.74	2.73
United Kingdom	14.37	12.06	12.68
British Possessions	7.88	8.53	9.43
Continent of Europe	4.79	3.09	2.39
Other Foreign Countries	16.60	17.52	19.39
	100.00	100.00	100.00

Exports and Re-exports.

Countries to which exported.	1931.	1932.	1933.
Singapore	23.18	26.50	25.94
Penang	37.44	32.19	27.06
Malacca	3.79	4.16	3.45
Unfederated Malay States	.56	.75	.87
United Kingdom	9.14	9.26	9.96
British Possessions	.88	1.14	.92
United States of America	18.86	16.15	18.97
Other Foreign Countries	5.15	9.85	12.83
	100.00	100.00	100.00

The foreign trade of Malaya as a whole (excluding parcel post) amounted to $760 millions in 1933 as compared with $747 millions in 1932, an increase of 2 per cent. The values of imports and exports in 1933 were $358 millions and $402 millions, respectively, representing a favourable balance of $44 millions as compared with an adverse balance of $14 millions in 1932. This increase in trade was chiefly due as in the case of the trade of the Federated Malay States to a rise in the average prices of the two principal exports, rubber and tin, both by 43 per cent., the total export values of which increased by $45 millions and $33 millions, respectively, as compared with those of 1932. Generally there was a slight but steady improvement in trade throughout the year. In percentages of total trade values Malaya's best customers were Netherlands India 20 (25.4) per cent., the United States of America 17.2 (10.5) per cent., the United Kingdom 13.9 (15.2) per cent., Siam 8.9 (8.1) per cent., Japan 8.3 (7.6) per cent., China 3.4 (3.5) per cent., India (excluding Burma) 3.3 (3.5) per cent., Australia 3.2 (4.0) per cent., Burma 2.6 (3.0) per cent. and Sarawak 2.5 (2.8) per cent., the figure for the previous year being shown in brackets. The principal import trade was, in this order, from Netherlands India, Siam, the United Kingdom, Japan, China, Burma, Sarawak and India, the principal export trade being to the United States of America, the United Kingdom, Netherlands India, Japan, France, the Netherlands, Australia, Siam and India. Net exports of bullion decreased from $35 millions in 1932 to $20 millions in 1933 or by 42.8 per cent. and of coin from $3.6 millions to $51 thousand or by 98.6 per cent. Exports were mainly to the United Kingdom 70.3 per cent. and Sumatra 26.3 per cent.

CHAPTER VIII.

Wages and Cost of Living.

The average weighted index of wholesale commodity prices in Singapore increased by 21 per cent. as compared with that of 1932 due to increases in the prices of damar, rattans, rubber, tapioca flake and tin. The average prices of, *inter alia*, arecanuts, coconut oil, copra, gambier, pepper, pineapples, rice, sago flour and tea declined during the year. There was a decline of 11 per cent. in the average retail food prices and 8.6 per cent., 6.5 per cent. and 4.8 per cent. in the general cost of living for Asiatics, Eurasians and Europeans, respectively. The fact that the wholesale index increased while the retail index continued to decline may be explained by the usual time-lag between the two. House-rents as represented by municipal assessments also declined, the decrease as compared with 1932 being 24 per cent. in Kuala Lumpur.

The index numbers of the general cost of living for the Asiatic, Eurasian and European standards were as follows :

Standard.	1914.	1932.	1933.	Percentage increase+ or decrease—as compared with 1932.
Asiatic	100	108.6	99.3	−8.6
Eurasian	100	113.1	105.7	−6.5
European	100	129.2	123.0	−4.8

The bulk of the labour in the Federated Malay States is employed on rubber estates and tin mines. The labour on the former is recruited mainly from Southern India while that on the latter is mainly Chinese.

In October, 1928, as the result of an enquiry in the coastal districts of Selangor, the following standard rates of wages were fixed for South Indian labourers employed in those districts :

An adult male labourer, 50 cents a day;
An adult female labourer, 40 cents a day.

The rates were based on a standard budget, including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. Standard rates for the inland districts of Pahang were fixed at 58 cents a day for each adult male and 46 cents a day for each adult female labourer. A subsequent enquiry, prompted by the fall in commodity prices and the inability of employers to pay these rates, was held in the middle of 1930 and the standard rates were then reduced to the following:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult male;
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult male;
37 ,, ,, ,, female.

Standard rates are the minima paid in Government departments.

Notwithstanding the fact that the average index number of weighted commodity prices of principal articles as shown in the Monthly Malayan Trade Returns increased by 21 per cent. as compared with 1932, the average cost of the articles included in a typical South Indian labourer's monthly budget declined by about 9.7 per cent. during the year. The price of Burma rice, which averaged 22 cents a gantang, was low over the whole year.

The conditions that prevailed over the last few months of 1932 continued over the first four months of 1933. Free repatriation was offered to all labourers for whom employment could not be found at the subsistence wage fixed by the Indian Immigration Committee in May, 1932. The steady improvement in the price of rubber which first manifested itself in April was soon reflected in earnings and in the drop in the numbers applying for repatriation. This upward trend in wage rates was materially assisted by the fact that the Council of the Planters' Association of Malaya agreed to a proposal put forward by the Controller of Labour, Malaya, in June that minimum wages of 28 cents for a man and 24 cents for a woman for morning work of 6 to 6½ hours only should be paid by all employers in the lower paid areas. These rates became general in a very short time and, before the end of the year, were exceeded in many areas. In those areas in which the higher standard wage rates were in force, rates of 35 cents for a man and 28 cents for a woman for a morning's work became general.

It is clear that the combined effect of the rise in wage rates and the drop in the cost of living of the South Indian labourer has considerably improved his position during the year and that British Malaya once again offers employment at wages that are attractive to the Indian worker, a fact which is proved by the considerable number of labourers who have paid their own fares across since October, 1933.

The wages of Chinese labourers on rubber estates were substantially the same as for Southern Indians. Of the labour engaged in mines approximately 20 per cent. is on contract (chiefly engaged in lode mining) and the remainder are in receipt of wages.

CHAPTER IX.

Education.

(*a*) *General.*—The expenditure upon education (including $108,908 spent by the Public Works Department on the building and upkeep of schools) was $2,985,268. Of this sum, $531,671 was paid in grants to English aided schools, $54,255 in grants to Tamil vernacular schools, $77,521 in grants to Chinese vernacular schools and $119 in a grant to a Javanese school in

Pahang. The total revenue amounted to $467,576 of which the sum of $237,426 represents the proceeds of the education rate, the remainder being derived from school fees and miscellaneous sources. The net expenditure on education was therefore $2,517,692.

Educational facilities are provided in the Federated Malay States in English and in various vernacular languages—Malay, Chinese and Tamil.

Schools are either Government, aided by Government, or private.

All schools, i.e., places where 15 or more persons are habitually taught in one or more classes (except where the teaching is of a purely religious character), and all supervisors, committees of management and teachers of schools must be registered in accordance with the Registration of Schools Enactment, 1927.

(*b*) *English Education.*—The English schools are schools in which English is the medium of instruction. Few of the pupils are English speaking when they join, and the lowest class may be composed of children speaking between them some seven or eight different languages or dialects, those speaking one language or dialect being generally quite unable to understand those speaking any of the others. In the circumstances the use of the "direct method" of teaching English is practically obligatory. Children are accepted into the lowest class at the age of six or seven and they are given an education which ends as a rule with their presentation at the Cambridge School Certificate Examination, though one or two stay on and prepare for the London Matriculation Examination.

The fees were $30 (£3 10*s*.) a year for the first six years (i.e., for the years spent in the primary division of the school) and $48 (£5 12*s*.) a year for the remaining period. These rates will remain in force for pupils enrolled prior to 1st January, 1934, but the rates for those enrolled on or after that date will be $36 (£4 4*s*.) a year for the first eight years (i.e., up to and including Standard VI) and thereafter $72 (£8 8*s*.) or $108 (£12 12*s*.) a year depending on the results of an examination, the successful pupils up to 50 per cent. of the available places paying the lower fee and the remainder paying the higher one.

Attendance is not compulsory.

In 1933 there were 24 Government English schools for boys, and 12 grant-in-aid English schools for boys and 13 for girls. The total average enrolments were 6,446, 5,452 and 4,350, respectively, a total decrease of 1,228 on the 1932 figures.

Of the 16,248 pupils in English schools, 3,375, or 20.77 per cent., were enjoying free education. The details of the nationalities so benefited were 290 Europeans and Eurasians, 1,784 Malays, 928 Chinese, 330 Indians and 43 others.

The Malay College, Kuala Kangsar, trains probationers for the Malay Administrative Service and for various Government departments. At the end of the year there were 105 students, all boarders. The general health of the boys was good except for a short period in November when a few pupils in the Preparatory School suffered from influenza. The average strength of the Cadet Corps was 3 officers and 49 other ranks. The average strength of the scouts was 3 officers, 41 scouts and 18 tenderfeet; the Assistant Commissioner for Malaya inspected them in March and gave them a very good report. Football, cricket and hockey are compulsory and tennis and fives were played regularly. The swimming pool was very popular. The cost of running the College was $61,703 as against $68,630 in 1932. The fees collected from the Federated and Unfederated Malay States boys amounted to $7,738. The College sustained a great loss by the death in April of Raja Sir Chulan, K.B.E., C.M.G., Raja di Hilir of Perak, one of the Governors of the College. Raja Kechil Bongsu has taken his place on the Board.

The aided English schools are managed by various Missionary bodies—the Christian Brothers, the Methodist Episcopal Mission, the Church of England, the Plymouth Brethren and the Sisters of the Holy Infant Jesus.

The Government pays to such schools monthly grants equal to the difference between their revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment, and salaries in respect of missionary teachers at the rate of $3,600 (£420) per annum for a male and $2,400 (£280) per annum for a female missionary. Capital grants amounting to half the cost of approved new buildings may also be paid under certain conditions.

The recommendations of the 1932 Grants-in-Aid Committee were approved by Government with slight modifications and are to take effect from 1st January, 1934. The more important changes are as follows:

(1) Salary allowances for European missionary teachers have been reduced to $3,000 (£250) a year for a male and $1,800 (£210) a year for a female missionary. Allowances at these rates, however, are to be payable only to a number of such teachers—not exceeding 16 per cent. of the total authorised staff of the school in boys' schools and not exceeding 25 per cent. in girls' schools. The other European missionary teachers will be paid at the rate of $1,440 (£168) a year for men and $1,200 (£140) a year for women.

For the missionary staff of the Christian Brothers' schools and the Convent schools, it has been decided to allow a flat rate of $2,400 (£280) a year for men and $1,500 (£175) a year for women.

(2) An age limit for missionary teachers of 55 in the case of men and 50 in the case of women has been introduced, provision being made for exceptional cases.

(3) Lay teachers will be subject to the same rules as regards age of retirement as teachers in Government schools.

(4) No leave (including sick leave) will ordinarily be allowed to a teacher who has reached the age limit.

Asiatic missionary teachers will not be eligible for pay while on leave other than sick leave.

(5) The annual capitation rate to cover all contingent expenditure has been reduced from $3 (7*s.*) a year per pupil to $2.40 (5*s.* 7*d.*) a year per pupil.

There is no central college for the training of teachers for English schools. Such training is supplied at normal classes held at certain centres in all States except Pahang where correspondence classes take their place. Examinations have to be passed at the end of each year of a three-year course, those for the first and third years being conducted by a central authority and that for the second year by the local Inspector of Schools and the Instructors. Student teachers who pass the third year examination become "trained teachers".

At the beginning of 1933 there were third year students in all States, second year students in Perak and Pahang and owing to the financial depression and lack of demand for teachers no first year students in any State. The only students remaining in training in the 1933-1934 session which started in April were to be found in an ordinary class in Perak and in a small correspondence class in Pahang.

At the annual examinations held in March, 1933, 63 students passed (38 men and 25 women); of these 18 men and 19 women completed the three-year course and became "trained teachers".

Only one student, from Selangor, was awarded a Student Scholarship to Raffles College. No other scholarships were awarded in 1933 in view of the uncertainty of the staffing position three years ahead. Ten Federated Malay States students were in training at Raffles College for work in classes in the secondary divisions of schools, of whom five were in the third year of their course, four in the second year and one in the first year. They were doing satisfactorily. Sixteen students completed their course and obtained their diplomas in May.

Technical education.

(*c*) *Vocational and Industrial Education.*—The Government Technical School, Kuala Lumpur, provides courses of training for students from the Public Works, Railways, Electrical, and Posts and Telegraphs Departments, and gives accommodation also to a class conducted by the Survey Department for its own untrained subordinates. At the end of the year there were 86 students under instruction at this school, 14 of whom were from the Colony and the Unfederated Malay States. For the first time in the history of the school private paying pupils were admitted; of these there were four and they paid $30 (£3 10*s.*) each per quarter. The reduction in the acreage of the school grounds caused by the carrying out of the Klang River Deviation Scheme was to a certain extent minimised by the acquisition of a portion of land which was formerly part of the old river bed.

Evening classes were held in Kuala Lumpur. The curriculum comprised English, practical mathematics, electrical engineering, workshops mechanics, machine drawing, coach building, locomotive engineering and heat engines. Science classes were held at the Victoria Institution for pupils of the Methodist Boys' School. For financial reasons evening classes in other centres were dropped.

Industrial education.

The Kuala Lumpur Trade School, a federal institution in 1932, was taken over by the State of Selangor on the 1st of January. There were 85 students, drawn from all the States of the Federation and including in addition two from Kelantan. Eight of the students, all from Selangor, paid fees. At the school a training in workshop mechanics is provided. The work and conduct of the boys were very satisfactory.

There were 75 students at the Trade School, Ipoh, 71 being Malays. Twenty-four students completed the three years' course in July. Most of them succeeded in getting employment.

The average enrolment of the Trade School at Bagan Serai was 45. Thirty-five students were examined by the Bagan Serai instructors at the end of their three-year course and 29 passed. Training in carpentry appears to be a definite wage earning asset. Boys who have passed out and have settled in their villages earn about $10 (£1 3*s*. 4*d*.) a month from carpentry as a spare time occupation.

The Trade School, Rembau, opened in 1930 to teach carpentry and wood work, had an enrolment of 32 at the end of the year. The progress of the students was satisfactory.

(*d*) *University and Collegiate* (*Post-Secondary*) *Education.*—The highest educational institutions in Malaya are the King Edward VII College of Medicine, Singapore, and Raffles College, Singapore. The course of the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom. Licentiates of the College are thus able to secure admission to the Colonial list of the Medical Register and to be registered as medical practitioners in any part of the British Dominions.

Raffles College, Singapore, was opened in 1928 in order to place education of a university standard within the reach of all the youths of British Malaya who were capable of profiting by it, and to meet an urgent need for qualified teachers for secondary classes. It provides three-year courses in arts and science. Diplomas are awarded to successful students.

The annual examination for the Queen's Scholarships was held in October. Fifteen candidates sat for this examination. No award was made for the Malay scholarship as the three Malay candidates failed to reach the necessary standard. The scholarship open to all races was awarded to Mr. H. D. Jesudason of the Victoria Institution, Kuala Lumpur. He proposes to study medicine at Cambridge.

Malay vernacular schools.

(*e*) *Vernacular Education.*—Malay vernacular education is entirely free. School buildings (as a rule), quarters for staff, staff, equipment and books are all provided by the Government.

The aim in these schools is (i) to give a general and practical education to those boys who have no need for an education in English, and who will find employment either in agriculture or in appointments in which a knowledge of the vernacular is all that is required, and (ii) to provide a sound foundation in the vernacular on which an education in English can be superimposed in the case of boys who desire to proceed eventually to an English school.

The school course normally lasts five years, during which period the pupils pass through five standards. The subjects of the curriculum are reading and writing (in the Arabic and romanised script), composition, arithmetic, geography, Malay history, hygiene, drawing and physical training. Boys do basketry and gardening in addition, and girls do needlework and domestic science.

In 1933 there were 449 schools for boys and 81 for girls with average enrolments of 36,359 and 4,760. The Malay teaching staff numbered 1,452. In addition there was a Javanese school in Pahang with 31 pupils.

Those who are to become teachers in the Malay vernacular boys' schools are in the first instance selected from the pupils who have shown promise. As pupil-teachers they both teach and study till they attain their sixteenth birthday and then soon after sit for an examination qualifying for admission to the Sultan Idris Training College, Tanjong Malim. If they do sufficiently well they are accepted into the College and put through a three-year course. Graduates of the College are designated "trained teachers".

At the end of the year there were 367 students and one probationer at the Sultan Idris Training College. One hundred and twenty-eight students completed their three-year course. The total expenditure was $113,873, towards which the Unfederated Malay States contributed $47,400 for their 77 students. The balance was defrayed by the Straits Settlements and the Federated Malay States Governments in the proportion of 1 : 2. The Translation Bureau housed in the College continued to publish school books and light modern literature in the Malay language; the cost of the Bureau was $11,609.

In the Malay girls' schools all general subjects were taught, a shortened form of the syllabus in the boys' schools being attempted. In addition a full and detailed syllabus in needlework, as well as in some craft selected specially for each State, was followed. In the Perak schools domestic science was taught, one whole day a week being given up to instruction in laundry, housecraft and cookery. Drill and practical hygiene figured as subjects on every school time-table. In the absence of anything but the most spasmodic of training for Malay women teachers in such subjects as arithmetic, composition and geography, the curriculum for girls' schools was planned to include a larger amount of the industrial work that was obviously more within the scope of the mistresses.

The question of providing more adequate training for the teachers in Malay girls' schools is under consideration and it is hoped that soon a great improvement will be effected.

Chinese vernacular schools.

The two Government Chinese vernacular primary schools at Kuala Lumpur continued to function satisfactorily. Both schools accommodate boys and girls and the education is free. At the end of the year there were 365 pupils in the two schools.

The number of Chinese schools receiving grants-in-aid in 1933 was 68 in Perak, 32 in Selangor, 4 in Negri Sembilan and 2 in Pahang, a total of 106.

The recommendations of the Grants-in-Aid Committee, 1932, have been approved and from 1st January, 1934, the grants-in-aid to Chinese vernacular schools will be in two grades :

I	$10 per year per pupil
II	5 ,, ,,

in average attendance. In order to qualify for Grade I schools must teach English for a minimum number of hours each day with reasonable efficiency and must employ for that purpose a teacher who holds the minimum qualification of a Junior Cambridge Certificate or a certificate recognised by the Director of Education as of equal value.

There are facilities for the primary vernacular education of Chinese boys and girls in all villages of any size and schools of 20 or even fewer students are maintained by the Chinese community so that no one may be denied instruction. Fees ranging from 50 cents to $2 a month are commonly charged but parents who are poor are exempted from payment.

There were no secondary schools in the Federated Malay States though 12 schools have developed beyond the primary stage and have secondary departments. Fees are paid at the rate of about $3 to $4 a month. There were 350 boys in these departments at the end of the year.

Secondary education for girls was provided at two girls' schools and 8 mixed schools and approximately 100 girls were in the secondary departments in 1933.

At the close of the year there were 358 registered schools with 887 registered teachers and 22,270 pupils, of whom 5,795 were girls.

Tamil vernacular schools.

At the end of the year there were 13 Government Tamil vernacular schools—eight in Perak, four in Selangor and one in Negri Sembilan. In addition there were 204 aided schools. Though there is no policy of co-education, a number of girls attend these boys' schools. In Perak there were two schools exclusively for girls and these were run by the Roman Catholic missionaries.

No fees are charged in estate schools but in some of the schools run by private bodies the pupils pay. There is usually an arrangement in such schools whereby poor children pay little or nothing. Government schools and private aided schools generally produce better work than the average estate school, but on estates where the labour force has been settled for years the standard of the work is as good as in town schools. Owing to lack of facilities and of trained teachers Tamil schools are generally behind Malay schools in such important subjects as drill, gardening and handwork.

The recommendations of the Grants-in-Aid Committee, 1932, that grants-in-aid should be paid at the rate of $6 per pupil per year, have been approved by Government with effect from 1st January, 1934.

Recreation.

(*f*) *Recreation, Music, Art and Drama.*—Every encouragement was given to pupils to participate in school games. In almost all English boys' schools the maximum amount of games and organised sports, normally of the "team" variety, is provided. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket grows more and more popular, football (association), hockey, volley ball, basket ball, tennis and badminton are played at most schools. Rugby football and gymnastics are provided in some of the bigger schools.

In all English girls' schools, as in boys' schools, drill and games are now compulsory. Some girls' schools play basket-ball and have tennis and badminton courts.

Physical training reaches a good standard in Malay boys' schools, and association football, encouraged by inter-school competitions, is much indulged in.

Music. Music is taught in all Convent schools and occasionally elsewhere. Singing is taught in the lower forms of all schools. Most schools have gramophones and a few have pianos. Cadet Corps and a few Scout Troops have their own bands.

Handwork and art. Handwork is taught under the supervision of trained European mistresses in the primary and elementary departments. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, cardboard modelling, clay and plasticine modelling, stick-laying, bead-stringing, paper flower making, raffia-work and wool-work. All the English girls' schools teach needle work which is generally of a very high standard.

Post-graduate courses of one year were arranged at the Sultan Idris Training College for ten specially selected Malay teachers in cotton-printing, lamp-shade making, book-binding and pottery.

Drama. The drama forms part of the English curriculum of all English schools. The lower standards act simple plays and dramatise stories. The senior boys and girls act scenes from Shakespeare.

CHAPTER X.

Communications and Transport.

POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

Posts. Postal facilities are provided in all the towns and larger villages in the Federated Malay States. There are now 99 post offices at which officers of the Posts and Telegraphs Department are employed and 69 places at which postal business is transacted by station masters and others acting as postal agents. In the course of the year postal agencies were established at Ringlet, Cameron Highlands, and at Kampong Pasir Panjang, Perak. The agencies at Pasir Salak and Bandar in Perak and at Karak in Pahang were closed.

The number of posting boxes exclusive of those in post offices and postal agencies was 305 on the 31st December.

During the year 137 licences for the sale of stamps and 246 licences for the collection of letters for transmission to China under the clubbed packet system were issued. The clubbed packet "rate" was raised from 8 cents to 12 cents per ounce or part thereof as from 1st November, 1933.

During the year lower working costs resulted from calling for new tenders for the conveyance of mails by road.

The developments and the increase in the volume of air mails referred to in the report for 1932 continued throughout the year. In May the route of the Netherlands Air Mail service which hitherto had been via Alor Star and Medan was changed so that on both the homeward and outward flights a call at Singapore was made. This change proved of great value to the commercial community of southern Malaya.

The most important development during the year was the extension in December of the Imperial Airways London/Karachi service to Alor Star and Singapore.

The Imperial Airways and the Netherlands Air services now provide between them a twice-weekly, rapid, regular and reliable air mail; the usual time in transit between London and Singapore being between 9 and 10 days.

Money orders.

All post offices and several postal agencies transact money order business and during the year 256,810 money orders to the value of $7,061,438 were issued and paid, this being a decrease of 53,336 in number and of $592,718 in value compared with 1932. Telegraph money orders included in the main 1933 total amounted to 6,974 in number and $448,389 in value.

Savings bank.

At the close of the year there were 51,539 depositors in the Federated Malay States Government Savings Bank, with a total sum of $5,444,460 standing to their credit. Deposits made during the year amounted to $3,889,855 and withdrawals to $3,186,898. Interest credited to depositors amounted to $137,068. Notwithstanding the severe economic crisis it is pleasing to record an increase of 9 per cent. in the number of depositors and 10 per cent. in the total amount in deposit.

Telegraphs.

There are 102 postal telegraph offices in the Federated Malay States. During the year 176,699 telegrams were despatched and 200,561 were delivered, being a decrease of 19 per cent. in the number despatched and of 20 per cent. in the number delivered as compared with 1932. The telegraph system operated satisfactorily throughout the year and there were no serious interruptions of communications.

The practice of telephoning telegrams to and from small offices continued to prove satisfactory and has been extended. At 31st December, 1933, Morse telegraph apparatus remained in use at 24 postal telegraph offices only.

The teleprinters installed at Kuala Lumpur and Ipoh were on the whole satisfactory. Some trouble was experienced at Ipoh during the early part of the year but this was overcome. A course of training for technical staff maintaining teleprinter instruments was carried out at head-quarters during the year with highly beneficial results.

Railway telegraphs and allied services.

The maintenance of the Federated Malay States Railway telegraph telephone block and electric tablet systems and certain other electrical plant was undertaken by the Posts and Telegraphs Department on and from 1st July, 1933, together with all renewals of and additions and alterations to these plants, on terms laid down in Federated Malay States Railways Agreement No. 1502 of 1933. These terms provide for the bulk of the work to be done at agreed yearly rates per unit of plant. Items not covered by such yearly rates are carried out at cost.

Telephones.

The number of direct exchange lines connected to the Federated Malay States telephone system as at 31st December, 1933, was 3,770, a decrease of 159 as compared with the number at the end of 1932.

In addition there were 2,051 extension lines, private lines and miscellaneous circuits maintained by the department, a decrease of 45 on the previous year's figure.

The revenue derived from telephones was $929,903, a decrease of $51,324 compared with 1932. Of this revenue the amount derived from junction and trunk services was $310,826, a decrease of $7,526 only compared with 1932.

Seventy-two public telephone exchanges were in operation in the Federated Malay States on 31st December, 1933.

As foreshadowed in last year's report two types of party line system were made available to the public at rates considerably lower than those in force for exclusive exchange lines as from April, 1933. The two types are:

(*a*) A simple two party line system without secrecy but with the refinements of separate numbering for the parties and selective ringing.

(*b*) A secret party line system for the use of 3 to 10 parties which provides for each of the parties to call or to be called without disturbing the others and for a "tone" indication to be given to any party calling when the common line is engaged. This is accomplished by means of automatic apparatus near to the premises of the parties. These facilities have met the need of a number of subscribers but the demand has been smaller than was anticipated. The lack of secrecy in type (*a*) above has prevented its adoption in a number of cases while in the case of type (*b*) difficulty is often found in arranging suitable groups of parties.

Five new exchanges were opened during the course of the year. These were all small rural automatic exchanges.

A new system of control for trunk traffic was introduced on 1st March. This new system aims at putting the control of all long distance calls in the hands of the larger "key" exchanges (known as zone and group centres) where the provision of special apparatus and the employment of specialist staff can ensure that such traffic is dealt with efficiently and with a minimum of delay.

One important effect of this new system was to permit the extension of the "Personal call" facility to all calls within the Straits Settlements and Federated Malay States as from 1st July. Hitherto this facility had been restricted to calls between Penang, Ipoh, Kuala Lumpur and Singapore.

An improved system for the tracing of the "required person" at any exchange within the "no delay" area of the normal exchange was also introduced at the same time. The number of "Personal calls" has increased by 300 per cent. in the six months following the introduction of the new facilities affording clear evidence that they are meeting a public demand.

The Carrier equipment at Kuala Lumpur, Ipoh and Tampin has given complete satisfaction. In spite of the depressed conditions during the year the volume of trunk traffic on the longer distance routes increased considerably. The revenue from the main "Carrier" channels connecting the Straits Settlements and Federated Malay States increased by 11 per cent. over the 1932 figures. During the second half of the year the increase was particularly striking, the second half year's figures being about 19 per cent. higher than that of the first half year of 1933.

Satisfactory results have been obtained with rural automatic and semi-automatic exchanges. The small 10-line equipment of semi-automatic type using magneto telephones at subscribers' premises installed at the Gap exchange operated satisfactorily throughout the year, and five additional equipments of this type were installed during 1933. One rural automatic equipment requiring automatic telephones at subscribers' premises was also completed early in January at the Cameron Highlands Hill Station and has given complete satisfaction. This has capacity for 25 lines and can be extended to 100 lines.

Wireless.

Kuala Lumpur.—The Petaling Hill transmitting station and the Kenny Road receiving station functioned satisfactorily during the year, the wireless services performed being:

(*a*) Regular telegraph services with Kuantan and Sungei Lembing in Pahang and Grik in Upper Perak.

(*b*) Regular telephone service with Kuantan in Pahang.

(*c*) Emergency telegraph services with Singapore and Penang and with Kuala Lipis, Temerloh, Kuala Krai and Kemubu in Pahang and Kelantan.

(*d*) Experimental test telephone services with Bandoeng (Java), Bangkok (Siam), Manila (Philippine Islands) and Saigon (Indo-China).

(*e*) Telegraphic communication as required with Royal Air Force, Imperial and Netherlands Airways and other aircraft.

(*f*) Reception of Meteorological bulletins broadcast from Hong Kong and Bangkok.

Experimental radiotelephone communication with Bandoeng (Java) was re-commenced on 4th September and with Saigon and Bangkok in December. Similar experiments with Manila were initiated in December. Communication with Bandoeng has proved of satisfactory commercial standard and arrangements were in hand at the close of the year for the institution of a regular telephone service between Malaya and Java. Tests with Saigon, Bangkok and Manila proved encouraging. The use of a new wireless receiver of modern type at the Kenny Road receiving station has contributed materially to the success of these telephony tests.

Pahang.—Stations were maintained at Kuantan, Kuala Lipis, Sungei Lembing, Temerloh and Jerantut, but the Jerantut station was closed down on 18th April. The Temerloh station ceased to be employed for regular telegraph traffic on 30th of January and thereafter was maintained in a similar manner to Kuala Lipis as an emergency station only. All telegraph traffic to Kuantan and Sungei Lembing continued throughout the year to be handled by these stations. Trengganu traffic is handled via Kuantan.

Kelantan.—On and from the 1st of July the maintenance and upkeep generally of the wireless stations installed by the Federated Malay States Railway Department at Kuala Krai and Kemubu for emergency communication with Kuala Lumpur during line interruptions were undertaken by the Posts and Telegraphs Department. These stations were employed on several occasions of emergency. During December the small power transmitter at Kuala Krai was replaced by more reliable and longer range apparatus that became available as a result of the closing down of the Jerantut station. A petrol engine generating set was installed at Kemubu to enable continuous operation and in the event of a protracted landline interruption. This station is dependent upon batteries which had previously to be taken elsewhere by train to be charged.

Upper Perak.—A new wireless station at Grik was opened on 1st July, and provides a direct telegraphic service with Kuala Lumpur. This arrangement was rendered desirable by the difficulty of maintaining the telegraph lines between Lenggong, Grik and Intan, and these lines have since been recovered.

Traffic.—The total number of messages dealt with by the regular telegraph service between the Kuala Lumpur station and the stations at Grik and in Pahang was 34,435. This compares with 41,619 in 1932, a decrease of approximately 17.3 per cent.

Communication with Aircraft.—Communication with aircraft on a wavelength of 900 metres and several short wavelengths was carried out from the Kuala Lumpur station as and when required. Regular watches for the weekly Netherlands aeroplanes were maintained and at the close of the year similar wireless facilities were extended to Imperial Airways.

Broadcast Receiving Licences.—Four hundred and seventy-three licences for the use of wireless receiving apparatus were issued during the year as compared with 236 in 1932 and 223 in 1931 representing an increase of 100 per cent. on the 1932 figures.

Broadcast Dealers' Licences.—Section 37 (i) (*b*) of the Telegraphs Enactment, 1933, whereby wireless dealers are required to be licensed came into force on the 1st October. There were 11 such licences in force in the Federated Malay States at 31st December.

Broadcasting.—Programmes provided by the Malayan Amateur Radio Society of Kuala Lumpur were broadcast three times weekly throughout the year—each programme being approximately of two hours' duration. Towards the close of the year the society was allotted accommodation lying spare adjacent to the Petaling Hill Wireless Station for use as a studio, and the necessary alterations thereto which are being carried out at the society's expense were nearing completion at the end of the year. The broadcasting wavelength of 48.92 metres was maintained throughout the year.

British Empire Broadcasting Service.—Regular transmissions of programmes from the British Broadcasting Corporation's Empire Station at Daventry, England, have been received at varying strengths throughout the year. In July and August parts of these programmes were received and re-broadcast experimentally by the Petaling Hill Station, Kuala Lumpur, with fairly satisfactory results.

Financial.

The nett revenue collected by the Posts and Telegraphs Department in 1933 was $2,002,022, a decrease of $266,964 compared with 1932. Annually recurrent expenditure amounted to $1,991,768, against $2,245,167 in the previous year, a decrease of $253,399. Special expenditure in 1933 (including loan account) amounted to $96,943. These revenue and expenditure figures do not include the value of services rendered free of charge by or to the Posts and Telegraphs Department, nor do they include acting allowances to the amount of $5,014.

RAILWAYS.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles) extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying the railway and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the West and the East Coast Lines.

The West Coast line runs north-north-west through Negri Sembilan, Malacca, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on the 1st July, 1918, the distance between Singapore and Bangkok being 1,195 miles.

The East Coast line proceeds northwards from Gemas through Negri Sembilan, Pahang and Kelantan terminating at the port of Tumpat. The length of the line is 328 miles and provides an alternative route to Siam from Singapore. A branch line 11¾ miles long from Pasir Mas in Kelantan to the Golok River at the Siamese boundary, connects with the Siamese line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore Line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on 1st November, 1921, and via the East Coast line on 6th September, 1931.

Branch lines connect the main line with ports on the west coast of Malacca, Port Dickson, Port Swettenham, Teluk Anson Wharf and Port Weld

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak; Kuang-Batang Berjuntai, 14 miles; Kuala Lumpur-Batu Caves, eight miles; Sungei Besi-Sultan Street, eight miles; Sultan Street-Ampang, six miles, all in Selangor.

The branch lines from Seremban to Port Dickson and Taiping to Port Weld were closed for passenger traffic during the years 1930 and 1933, respectively, as the revenue derived did not justify the retention of the passenger services, whilst the Connaught Bridge Junction to Kuala Selangor and Kuala Kubu Road to Kuala Kubu branches, which were closed to traffic during the years 1931 and 1932, respectively, for similar reasons, have been abandoned.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,067 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are provided with restaurant or buffet parlour cars and sleeping saloons.

There are 212 permanent stations and 74 flag stations.

Financial.

The expenditure on Capital Account amounted to $233,399,875 on 31st December, 1933, of which $183,679,830 was met from Revenue Advances and $49,720,045 from Loan Funds.

The receipts in 1933 from all sources were $9,036,776, a decrease of 4.71 per cent. compared with 1932. Expenditure chargeable to Revenue Account (excluding Renewals Fund contribution) amounted to $11,076,686, an increase of 0.87 per cent. This expenditure includes a sum of $1,500,000 being additional expenditure required to meet the cost of retrenchment in the form of extra pensions and gratuities. The receipts from all sources were $2,039,910 less than the total expenditure on all services and no contribution has therefore been made to the Railway Renewals Fund.

Capital expenditure.

During the year the nett expenditure on Capital Account was $171,446 compared with $691,397 in 1932.

Renewals Fund.

The nett expenditure from the Railway Renewals Fund during the year amounted to $489,631 compared with $1,255,365 in 1932. The balance standing to the credit of the Fund at 31st December, 1933, was $6,359,290, the corresponding figure at 31st December, 1932, being $6,816,467.

Passenger train traffic.

The receipts from passenger train traffic amounted to $3,121,302 compared with $3,685,751 in 1932, a decrease of $564,449 (15.31 per cent.).

Goods train traffic.

The receipts from goods train traffic amounted to $3,988,231 compared with $4,037,965 in 1932, a decrease of $49,734 (1.23 per cent.).

Road motor transport services.

The receipts from road motor collection and delivery services amounted to $109,989.

Miscellaneous services (docks, ferries, rents, etc.).

Miscellaneous services produced receipts to the amount of $1,817,254 during the year 1933 compared with $1,662,595 in the previous year—an increase of $154,659 (9.30 per cent.).

The revenue returns for the year reflect the depressed condition of trade and intense competition, but there are indications that the fall in revenue has been arrested as a slight improvement was recorded over the last six months of the year.

Railway Board.

The Railway Board, composed of four official and seven unofficial members, held three meetings during the year.

ROADS.

Roads have been upkept as efficiently as funds would allow and it was fortunate that the condition of the roads generally just before the slump was so good that one or two years of drastic economy in maintenance could be weathered without their complete deterioration.

The amount collected in tolls from the Iskandar and Blanja Bridges in Perak was $44,062, and it is pleasing to record that the toll system worked smoothly and without friction throughout the year.

Repairs and strengthening to the 165 feet long bridge at Sungei Pari near Ipoh were of particular interest as for the first time on record the process of arc welding was utilized in this country.

A heavy rainstorm on the night of 22nd May did considerable damage to the Gap Road, necessitating the road being closed for four days, and the eight-stall garage at the Gap Rest-house was completely destroyed by a landslide.

A small experimental piece of rubber roadway was laid down in Kuala Lumpur.

As the antithesis of the flood, a novel experience was encountered at Sungei Lepar in Pahang where the dry weather flow of the river became so low that the ferry could no longer be used. This occurred just before the coronation ceremonies of His Highness the Sultan of Pahang, and the engineer in charge quickly arranged for a low level bridge 240′ long to be built. This was erected in four days, suitable for one way traffic, and thus visitors and guests to the ceremonies were able to proceed to Pekan and an awkward situation was saved.

The total mileage of roads on 31st December, 1933, was 2,863 miles including 1,871 miles, or 65.4 per cent., of roads bituminously treated.

The enforced reduction of expenditure on road maintenance again resulted in a lower average cost per mile for upkeep, viz.: $512 per mile compared with $577 per mile in 1932 and $1,070 per mile in 1931. Total expenditure on maintenance of metalled roads was $1,467,750 as compared with $1,654,753 and $2,960,968 in the two preceding years.

In addition to metalled roads 150 miles 39 chains of unmetalled roads and 1,535 miles 34 chains of bridle-paths were maintained.

During the year attempts were made to employ Malays on road work, and although the initial efforts were not altogether satisfactory it is hoped that by replacing unsatisfactory workers with others of the same nationality the experiment should prove successful, and in course of time be beneficial to all concerned.

Shipping.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during 1933 were 2,666 vessels and 5,863,698 tons as compared with 2,596 vessels and 5,925,736 tons in 1932, being a decrease of 62,038 tons.

The number and tonnage of ocean-going steamers entered and cleared at this port were 1,690 vessels and 5,358,614 tons as compared with 1,314 vessels and 5,250,130 tons in 1932, being an increase of 108,484 tons.

The number of ocean-going steamers which came alongside the wharf was 256 against 197 in 1932. The largest vessel entering the port was s.s. "Philoctetes" (British) of 11,446 tons. The deepest draft vessel entering the port was s.s. "Menelaus" (British) drawing 31' 8" of water.

The following table shows the nationality, number and tonnage of merchant vessels entered and cleared at Port Swettenham during 1933:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American	13	46,839	13	46,839	26	93,678
British	570	1,991,493	570	1,991,493	1,140	3,982,986
Danish	33	120,951	33	120,951	66	241,902
Dutch	94	163,257	94	163,257	188	326,514
French	1	4,629	1	4,629	2	9,258
German	36	160,824	36	160,824	72	321,648
Japanese	36	142,947	36	142,947	72	285,894
Norwegian	48	41,436	48	41,436	96	82,872
Siamese	12	9,129	12	9,129	24	18,258
Swedish	2	7,813	2	7,813	4	15,626
	845	2,679,307	845	2,679,307	1,690	5,358,614

CHAPTER XI.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—7 branches.

Hongkong and Shanghai Banking Corporation—2 branches.

The Mercantile Bank of India Limited—4 branches.

There are no Agricultural or Co-operative Banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under Enactment 16 of 1921 the standard weights and measures are:

(i) The Imperial Standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns ... ... =1 chi
10 chi ... ... =1 tahil (1⅓ oz.)
16 tahils ... ... =1 kati
100 katies ... ... =1 pikul (133⅓ lbs.)
40 pikuls ... ... =1 koyan

CHAPTER XII.

Public Works.

The expenditure of the department was $4,889,452 (including a sum of $200,347 from the Straits Settlements Sterling Loan, being part cost of "Suleiman House" taken over from the Railway Department) out of an originally authorized provision of $5,915,408.

Reductions on the provisions were made during the year as follows:

Annually Recurrent	$494,121	
Special Services, Revenue Account	7,321	
		$ 501,442

and savings were effected as follows:

Annually Recurrent	$301,472	
Special Expenditure	897	
Special Services:		
Revenue Account	35,513	
Loan Account	176,632	
S.S. Sterling Loan	10,000	
		$ 524,514
Total reductions and savings		$1,025,956

The value of work carried out by the Public Works Department for other departments amounted to $83,415 bringing the total expenditure for the year to $4,972,867.

The expenditure of $4,889,452 was made up as follows:

Annually Recurrent		$4,088,634
Other Charges and Special Expenditure		4,720
Special Services:		
Revenue	$261,202	
Local Loan	334,549	
S.S. Loan	200,347	
		796,098

The corresponding figures for 1932 were:

Annually Recurrent	$4,430,611
Other Charges and Special Expenditure	4,801
Special Services	2,750,027

being a decrease of $2,295,987.

The comparative percentages of expenditure to authorised provision in 1933, 1932 and 1931 were as follows:

	1933.	1932.	1931.
	Per cent.	Per cent.	Per cent.
Annually Recurrent ...	93.13	87.89	90.77
Other Charges and Special Expenditure	84.03	48.73	86.51
Special Services	88.03	84.50	63.69

There is little to report in the way of new buildings, new roads and road improvements or general increase in amenities. Work has been confined for the most part to maintaining existing works and endeavouring "to do without", where necessary, even to the extent of reducing standards of upkeep.

Buildings were maintained in a reasonable state of repair and the main structures are generally sound. The percentage of upkeep cost to estimated value of buildings was again lower at 0.834 per cent. against 0.91 per cent. in 1932.

Waterworks were maintained in good condition throughout the year and many small economies were effected in the cost of upkeep and supply.

DRAINAGE AND IRRIGATION.

This is the second year of operations of the Department of Drainage and Irrigation which was created in 1932 as a result of the recommendations of the Rice Cultivation Committee.

The collection and collation of hydrological data was continued by the department. Maximum, minimum and mean discharges in cubic feet per second per square mile of catchment area for each month of the year were computed at 31 stations on various rivers; gaugings by current meter being taken at 57 stations on 33 rivers; and rainfall records were collected from 470 stations throughout Malaya.

The following major schemes of irrigation and drainage were in course of construction during the year, in addition to several minor schemes:

The first stage of the Sungei Manik Irrigation Scheme and the Pumping Scheme to irrigate riverine areas in Perak.

The Controlled Drainage Scheme for padi areas at Panchang Bedina.

The Sungei Buloh Irrigation Scheme.

Preliminary work on the draining and bunding of the Sabak Bernam Peninsula in Selangor.

The Sungei Blat Irrigation Scheme in Kuantan, Pahang.

The intake works and control gates for the first stage of the Sungei Manik Irrigation Scheme were completed in February but progress on the earthwork of the channels was delayed by wet weather, and also by adverse labour conditions which were affected by a rise in the rubber and tin market. The main earthwork contract was practically finished—at a considerable loss to the contractor—but it was necessary to raise the rates for the remainder of the earthwork. The land is being opened up rapidly and in some cases padi has been interplanted between the felled jungle.

Sanction to commence work on the pumping scheme for the irrigation of riverine areas in Perak was given in June, whereupon the District Officer arranged for the setting out of way-leaves for the first five miles. Of five indents given to different ketuas for five miles of construction, only one ketua—after much persuasion—completed three chains of channels at the rates offered and it was found necessary to let the work to Chinese contractors. Three miles were completed by the end of the year and work was well in hand on a further four miles. An order for the pumping plant was placed with the Crown Agents through the Government Factory in September and the plant is expected to arrive in April, 1934. It is hoped that the scheme will be completed for the 1934 padi season.

The preparation of plans for the increasing of the water supply to Krian Irrigation Reservoir and enlarging the main canal, in order to provide for the irrigation of further areas in Krian and also for lands in the trans-Krian area in Province Wellesley, was completed. It is anticipated that the work will be executed in 1934.

Work on the Panchang Bedina Controlled Drainage Scheme in Selangor was concentrated on the jungle clearing left over from the previous year, while earthwork was chiefly confined to those drains for which the jungle was cleared in 1932. A further nine control gates were put in hand but difficulty in obtaining delivery of stone for concrete prevented the contractor from finishing to time. The total of the gates now completed or in hand is twenty and five more remain to be done in 1934. Nine of those built in 1932 have been utilised for regulating the water for this year's padi crop and their success should encourage development of the area.

The survey work for the draining and bunding of the Sabak Bernam peninsula area was completed and two water-gates were being constructed on contract at the end of the year. The tenders for the reconstruction of the existing coast bund were disappointingly high and it was decided to give out small contracts to Malays. At the end of the year negotiations were in progress with a view to giving the rest of the bund construction work to a European firm which proposed to employ mechanical excavators at a considerably lower rate per cubic yard.

The Klang River deviation was completed during the year in so far as the money voted permitted, and the dry weather channel was brought to correct grade by the removal of 1,860 cubic yards of rock and hard shale. The old river bed from the Technical School to Kampong Attap at Kuala Lumpur was filled up and temporary drains constructed to serve until the town drainage system in this area is remodelled.

About 30 per cent. of the Sungei Buloh Irrigation Scheme was left unfinished, the delay being due to protracted land acquisition negotiations.

In Negri Sembilan dams were constructed at Kampong Solok in Rantau district, at Kampong Inas, and at Ampang Jeram, to replace dams constructed by Malays, at Sungei Machang Ilir, for the irrigation of an area of 100 acres; and a tide gate was erected at Chuah to prevent tidal inundation of an area of 800 acres.

In May serious slips occurred along the Temiang deviation blocking the channel at various places, and a sum of $1,000 was spent in removing 4,800 cubic yards of loose material.

The construction of spillweir and repairs to the dam at Kubang Karah, Pahang, for a scheme to provide a 20-day supply of water for 400 acres was completed.

Good progress was made on the controlled scheme for the padi areas between the Sungei Blat and Sungei Pandan in Kuantan, and $10,500 was spent, the work performed consisting of over 500 chains of bunds and drains, about 12 acres of clearing along reserves of bunds and drains and the construction of 10 control gates. Eight hundred and fifty acres have been brought under control of which 600 are now under cultivation. The general outlook of this area (about 3,000 acres will be brought under cultivation eventually) is very promising.

All the main rivers in the Federated Malay States were maintained in good order by snagging, widening, bank-conservancy and channel control. Forty-nine thousand cubic yards of silt were removed from the Kinta river by dredging operations and by private individuals. Clearing on the Batang Padang river was carried out by the dipper dredger "Clyde" and at the end of the year the dredge had nearly reached the Degong Railway Bridge, which is the limit of the proposed operations. The suction cutter dredger "Galloway" was moved from Batu Gajah to Kuala Larut for the purpose of dredging the Larut river, a start on which was made on 13th June. By the end of the year 65 chains had been dredged and 90,489 cubic yards of silt removed. In Selangor the Sungei Tinggi was cleared for a distance of 4 miles 10 chains, while maintenance work was carried out in the Klang, Damansara, Buloh and Tinggi rivers; river clearing was also done on the Langat, Sidu, Agong and Choh rivers.

In Negri Sembilan ten rivers were cleared and snagged for a length of 41¼ miles. Three thousand nine hundred and eighty-two tons of snags were removed amounting to approximately 96½ tons per mile; while in Pahang, river maintenance was carried out to prevent damage to property or where its effect was of immediate benefit for logging or river transport.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment, 1918, and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;

(*b*) Courts of a Magistrate of the First Class;

(*c*) Courts of a Magistrate of the Second Class;

(*d*) Courts of a Kathi and Courts of an Assistant Kathi;

(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record. The establishment consists of a Chief Justice and three Judges, but the Judges of the Supreme Court of the Colony and of the State of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The qualification required of a Judge is that he should have five years' seniority as a barrister or a member of the Faculty of Advocates in Scotland or ten years as an advocate and solicitor of the local bar.

Magistrates are appointed by the Resident by name or office. Appointments have always been made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally, every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a Penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a Penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment, 1928, for the decision of disputes arising in connection with mining matters and the

Controller of Labour has a jurisdiction under the Labour Code, 1923, in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang the Police contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner, who, subject to the general direction of the Commissioner of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his contingent. A fifth contingent exists in the Depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner, who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is also in Kuala Lumpur the Head-quarters staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch, which co-ordinates the criminal and political intelligence of the Federated Malay States, and the Criminal Registry or finger-print bureau, which serves not only the Federated Malay States but also the Straits Settlements and Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hongkong, Dutch East Indies, Siam and Indo-China.

The Federated Malay States Police furnishes British Officers for the Unfederated Malay States and for the Federated Malay States Railway Police.

The total approved strength of the Police Force is 3,934, comprised as follows:

103	British officers;
55	Malay and other Asiatic officers;
2,301	Malay rank and file;
1,251	Northern Indian subordinate police officers and constables;
224	Detectives (of various nationalities);

in addition there is a Veterinary Police Force of 68 Malays and Indians which, for disciplinary purposes and reasons of economy, is housed in Police barracks and is paid from Police votes, though under the direction of the officers of the Veterinary Department.

The approved strength of the uniformed rank and file comprised of Northern Indians and Malays was reduced by 75 during the year, making a total reduction since 1930 of 392.

The proportion of Northern Indians to the total was 44 per cent. in 1930; it is now 35 per cent.

British officers have been reduced by 18 in the same period and Malay and Asiatic officers increased by 12.

The reductions have had no apparent adverse effect on the efficiency of the Force.

The approved strength of detectives in 1930 was 241.

During the year 207 Malays were enrolled; no Indians were recruited. Of the Malay recruits 25 per cent. had received an English education of varying standard; all except 43, who were born either in Malacca or Penang, were natives of one of the four States of the Federation.

Offences reported during 1933 totalled 98,677 compared with 86,552 in 1932.

Seizable offences decreased from 11,029 to 9,065 and at the close of the year convictions had been recorded in 2,686 of such reports.

Reports of serious crime fell from 307 to 153, made up of 69 murders, 16 gang-robberies and 68 robberies compared with 79 murders, 91 gang-robberies and 137 robberies. Four murders were committed in the course of gang-robbery or robbery. There was no case of gang-robbery in Kinta which has long held the reputation for being the most lawless district in the Federated Malay States. The only known gang that was unaccounted for operated in the Raub district of Pahang.

No persons were abducted during the year.

There were no cases of counterfeiting notes or currency.

Reports of house-breaking, many of a minor character, fell from 1,878 to 1,606, a figure still twice as large as the total in 1928.

There were 4,601 thefts compared with 5,836 and a large drop in the number of bicycles reported stolen.

Reports of non-seizable offences increased from 75,493 to 89,612; the police prosecuted in 65,062 instances compared with 50,957. The lull in serious crime enabled greater attention than usual being paid to statutory offences, and prosecutions under the Motor Vehicles and Vehicles Enactments accounted for an increase of 11,400.

Public lotteries disguised in various manners were widespread; otherwise there was no important public gaming.

Sixty-one firearms of which 24 were home-made weapons were recovered during the year; eight of the weapons recovered had been previously reported as having been stolen or lost, whilst eight were found in the possession of extortioners.

The work involved in the suppression of brothels and trading in women was carried out by the police. Ten men were convicted of whom nine were banished for trading in prostitution, two women were convicted and three banished for aiding or compelling prostitution, whilst 29 convictions were obtained and banishment of 18 persons was approved for offences against the general section dealing with the suppression of brothels.

Duties connected with the issue and renewal of passports were performed by the police; 540 new passports were issued, 400 renewals granted and 274 endorsements made.

At the close of the year there were 278,050 finger impression slips on the files of the Criminal Registry. During the year inquiry was made at the registry regarding 27,182 persons charged with offences, and identity was established in 5,450 instances.

There were 496 persons banished from the Federated Malay States during the year.

PRISONS.

Description.—Of the six prisons in the Federated Malay States the one located at Taiping is primarily a convict prison. The others at Batu Gajah, Kuala Lumpur, Seremban, Kuala Lipis and Kuantan are local prisons.

Prisoners are also detained for short periods in lock-up cells at certain police stations.

Vagrants are confined in special vagrant wards.

Population.—The total daily average population of all the prisons which in 1932 was 1,829.66 decreased to 1,540.55 for 1933.

At the beginning of 1933 there were 1,633 prisoners remaining and 7,851 were admitted during the year. On the 31st December, 1933, there were 1,364 prisoners remaining in all the prisons after 8,091 discharges, 17 deaths and 12 executions.

Health.—The health of the prisoners throughout the prisons in the Federated Malay States was uniformly good.

Juvenile Offenders.—Juvenile offenders are sent to the Reformatory at Singapore as there is no special institution in the Federated Malay States for the detention of juveniles.

The Education Department administers the Reformatory.

There is no probation system.

CHAPTER XIV.

Legislation.

Forty-three Enactments were passed during the year 1933 of which the following were the most important:

No. 2, The Aliens Enactment, deals only with the residence of aliens in the Federated Malay States and follows Parts II and III of the Colony Ordinance relating to aliens. Part I which provides for the admission of aliens from foreign countries is inapplicable to the Federated Malay States and has not been adopted. The Enactment provides for the appointment of Immigration Officers and for the issue of certificates of admission to all aliens resident in the Federated Malay States.

No. 4, The Railways (Amendment) Enactment, repeals sections 18, 19, 20, 21 and 28 (ii), (iii) and (iv) of the 1912 Enactment. The effect of this repeal is to remove the requirements of the Enactment as to the provision of all reasonable facilities for the receiving, forwarding and delivery of traffic, and the prohibition of the giving of undue preference. This was one of the measures designed to protect the Federated Malay States Railways from road competition.

No. 30, The Malay Reservations Enactment, aims at preventing the commercialisation of land in Malay Reservations and is designed to assure to Malays holding land in reservations possession of their land. Stringent restrictions are placed upon dealings in such land and no transfer, charge, or lease to a person other than a Malay is capable of registration under the Land Code. Dealings under powers of attorney by persons other than Malays, liens and caveats are also affected, and provision is made that Malay Reservation land shall not pass to the Official Assignee on the bankruptcy of the proprietor nor shall it be attached in execution.

No. 32, The Post Office (Amendment No. 2) Enactment, enables the stamps of the Colony and of the Malay States under British protection to be used for postal purposes in the Federated Malay States and for the stamps of any Federated Malay States to be used throughout the Federated Malay States.

No. 34, The Registration of Dentists Enactment, recognises as entitled to practice dentistry in the Federated Malay States all dentists registered in the common register of dentists kept under the provisions of the Colony Ordinance of 1933. The procedure is similar to that which has long been in force in respect of the medical register. There are two representatives of the Federated Malay States on the Dental Board which controls the register.

No. 38, The Public Trustee (Amendment) Enactment. The principal change introduced by this Enactment is the establishment of a Common Fund which will consist of certain moneys in the hands of the Public Trustee. The object of the legislation is to enable the capital moneys forming the fund to be invested, irrespective of ownership, and a fixed rate of interest, declared annually, to be paid to the beneficiaries.

The fund will be a considerable benefit to small estates the amount of which would make separate investment difficult, if not impossible, with the result that they would receive nothing more than bank deposit rate. In addition the beneficiaries have the advantage of a Government guarantee of repayment and of payment of interest.

CHAPTER XV.

Public Finance and Taxation.

Budget for 1933.

The Estimates of Revenue and Expenditure for the year 1933 provided for a revenue of $44,083 825 (excluding Railway revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway expenditure on Revenue Account) of $54,521,473.

Actual revenue and expenditure.

The actual revenue for the year was $47,198,806, while the expenditure, including the deficit on the working of the Railway amounting to $2,039,910 (of which only $1,000,000 was provided for in the Estimates) came to $50,258,671. There was thus a deficit of $3,059,865 against an estimated deficit of $10,437,648.

The shortages and excesses in revenue as compared with the estimate were :

	Excesses.	Shortages.
Customs	$1,064,432	
Excise	500,574	
Forests	—	$ 40,179
Lands and Mines	—	848,078
Licences and Internal Revenue	30,452	
Fees of Court, etc.	1,894,065	
Municipal	76,619	
Electric Light and Power	—	78,680
Water	2,616	
Profits, Government Slipway	50,042	
Posts, Telegraphs and Telephones	—	97,977
Timber and Minor Forest Products	—	1,743
Rent on Government Property	—	13,118
Interest	151,223	
Miscellaneous	324,400	
Land Sales	99,836	
Sale of Property	1,500	
Grant from Colonial Development Fund	—	1,003
Total	$4,195,759	$1,080,778

Nett excess ... $3,114,981

By far the largest shortage—that under Lands and Mines—was due to the remission of all quit-rent in excess of $2 per annum, a decision reached after the Estimates had been approved.

The excesses and shortages in Customs, Excise, Lands and Mines, Licences and Internal Revenue and Municipal revenue as compared with the estimate were :

		Excesses.	Shortages.
Customs—			
Export Duty on	Tin	$1,507,317	
,,	Rubber	308,351	
Import Duty on	Tobacco	—	$ 423,928
,,	Spirits	—	53,891
,,	Petroleum	—	210,194
,,	Kerosene	66,249	
,,	Sugar	—	1,030,598
,,	Edible Oils and Fats	90,086	
,,	Textiles and Apparel	672,413	
Other Items		138,627	
	Total	$2,783,043	$1,718,611

Nett excess ... $1,064,432

	Excesses.	Shortages.
Excise—		
Sale of Chandu	$ 675,208	
Other Items	—	$ 174,634

Nett excess ... $500,574

	Excesses.	Shortages.
Lands and Mines—		
Land Rents (Recurrent)	— ...	$ 894,161
Other Items	$ 46,083	
Nett shortage ...	$848,078	
Licences and Internal Revenue—		
Traction Engines and Motor Cars ...	$ 16,969	
Other Items	13,483	
Total ...	$ 30,452	
Municipal—		
General Assessment	$ 24,463	
Other Items	52,156	
Total ...	$ 76,619	

The excesses under Fees of Court, etc., and Miscellaneous Receipts are accounted for by the following large items:

A.—Fees of Court, Etc.

(*a*) Contribution by Railway towards pensions and gratuities over estimates	$1,400,000
(*b*) Recoveries of leave salaries and passages from other administrations, etc., over the estimates	270,000
(*c*) Reimbursement on account of abolition of Motor Vehicles Insurance Fund ...	74,000

B.—Miscellaneous Receipts.

(*a*) Adjustment of Electrical Department Stores Account	104,000
(*b*) Profit on sale and appreciation in value of investments and gain on exchange	124,000

The savings and excesses in expenditure as compared with the estimate were:

Head of Expenditure.	Savings.	Excesses.
Reserved Services—		
Charges on Account of Public Debt ...	$ 36	
Pensions, Retired Allowances, Gratuities, etc.	610,232	
The High Commissioner	5,253	
The Rulers and Native Officers ...	23,221	
The Chief Secretary	6,795	
The Residents	14,748	
Civil Service	139,693	
Audit	8,759	
Commissioner of Lands	1,717	
Courts	— ...	$ 10,716
Carried forward ...	$810,424 ...	$ 10,716

Head of Expenditure.	Savings.	Excesses.
Brought forward	$ 810,424	$ 10,716
Reserved Services—(*cont.*)		
District and Land Offices (including Settlement Officers)	119,083	
Exchange	100,000	
Fire Brigade	2,364	
Game Warden	1,556	
Geological	2,681	
Government Gardens and Plantations	10,358	
Indian Interpreters	2,485	
Labour	123,816	
Legal Adviser	896	
Marine	25,770	
Miscellaneous Services	—	51,794
Municipal	467,128	
Museums	2,419	
Office of the Registrar of Titles	138	
Posts and Telegraphs	277,684	
Printing	60,030	
Purchase of Land	23,890	
Railways	—	1,039,910
Town Planning	13,186	
Trade and Customs	206,319	
Treasury	—	5,166
Widows and Orphans' Pensions and Public Officers' Guarantee Fund	3,307	
Colonial Development Fund	1,003	
Total Reserved Services	$2,254,537	$1,107,586
Unreserved Services—		
Agricultural	$ 48,626	
Chinese Secretariat	19,913	
Clerical Service	136,382	
Co-operative Societies	10,499	
Drainage and Irrigation Department	36,258	
Drainage and Irrigation Works, Annually Recurrent	58,765	
Drainage and Irrigation Works, Special Services	16,551	
Education	239,811	
Electrical	196,088	
Estate Duty Office	199	
Fisheries	5,169	
Forest	118,394	
Malay Officers	53,340	
Medical and Health	720,389	
Military	65,201	
Mines	53,571	
Carried forward	$1,779,156	$

Head of Expenditure.	Savings.	Excesses.
Brought forward ...	$1,779,156 ...	$
Unreserved Services—(*cont.*)		
Miscellaneous Services	— ...	18,003
Official Assignee and Registrar of Companies	467	
Police	214,946	
Prisons	119,653	
Public Trustee	21	
Public Works Department	92,251	
Public Works, Annually Recurrent ...	707,029	
Public Works Extraordinary (Revenue Account)	— ...	32,312
Surveys	254,214	
Transport	— ...	7,554
Veterinary	5,983	
Total Unreserved Services ...	$3,173,720 ...	$ 57,869
Grand Total ...	$5,428,257 ...	$1,165,455

Nett Savings ... $4,262,802.

The excess under Railways is due to retirements on account of retrenchment, that under Courts to the engagement of extra temporary Judges, and that under Miscellaneous Services, Reserved and Unreserved, to the following for which no provision was made in the estimates :

1. Loss on purchase of tin	$46,300
2. Repatriation of retrenched Government subordinates	11,200
3. Loss on factory trading for 1932	23,700

Public debt.

The total amount of the public debt on 31st December, 1933, was $96,185,714, being :

Straits Settlements Sterling Loan ...	$80,185,714
Federated Malay States Local Loan ...	16,000,000

The Straits Settlements Loan remained as on 31st December, 1932, at $80,185,714 (£9,355,000). The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent., and the second instalment (£4,200,000) in May, 1922, at 95, with interest at 4½ per cent. The Sinking Funds contributions which started in 1925, amount to $21,701,152.

The Federated Malay States Local Loan of $16,000,000 was issued in May, 1931, at 98, bearing interest at 4½ per cent. Contributions to a Sinking Fund for the redemption of this loan will have to be provided out of revenue after the 1st January, 1934.

The following statement shows the assets and liabilities on the 31st December, 1933 :

Assets and liabilities.

LIABILITIES.		$	c.
Capital Account (Straits Settlements Sterling Loan) Balance at credit thereof (*a*)		489,071	61
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959) Balance at credit thereof (*c*)		5,583,519	87
Sundry Outstanding Accounts		103,542	11
Due to India (Agency Account)		147,887	45
„ „ (Current Account)		63,153	97
Due to Ceylon (Agency A/c) ...		239,512	47
Due to F.M.S. Railways ...		346,386	38
Due to Singapore		14,454	15
S.S. Government War Service Land Grant Scheme		6,305	83
Deposits—			
Courts	$164,736.34		
Forests	168,010.98		
Lands	199,780.32		
Postal	160,174.18		
Postal A/c Stores— Colony	300,000.00		
Planters' Loan Board	600,000.00		
Miscellaneous ...	728,103.64		
		2,320,805	46
Selangor River Protection Reserve Account		108,301	47
Sundry Funds—			
Police Fine and Reward Fund...	$ 45,505.85		
Public Officers' Guarantee Fund	362,851.25		
Composition Stamp Duty Fund	394,233.68		
R.E.R. and P. Reserve Fund	2,298,493.21		
Phillips' Agricultural School Scholarship Fund	5,251.38		
Malayan Flood Relief Fund ...	48,234.99		
Miscellaneous ...	34,518.04		
		3,189,088	40
War Savings Certificates, 1924-1927		280	00
Suspense		4,855	28
Surplus—			
Opium Revenue Replacement Reserve ...	$27,164,906.96		
General Surplus	37,811,728.88		
		64,976,635	84
		77,593,800	29

ASSETS.		$	c.
Cash in Treasuries and Banks		4,718,309	29
Cash with Agencies—			
Crown Agents	$ 17,138.79		
Malayan Information Agency ...	35,424.72		
Penang	26,583.08		
Singapore	11,423.34		
		90,569	93
Cash in Transit		497,606	25
Joint Colonial Fund		394,285	67
Fixed Deposits		500,000	00
Investments, Surplus Funds—			
4 per cent. Singapore Municipal Debentures 1897	$ 710.50		
4½ per cent. F.M.S. Local Loan, 1959	9,911.25		
Sterling Securities	4,878,793.85		
		4,889,415	60
Perak River Hydro-Electric Power Co., Ltd.	$1,285,714.29		
Sungei Draka Plantations	26,506.47		
		1,312,220	76
Investments, Opium Revenue Replacement Reserve Fund—			
(i) Sterling Securities .	$19,879,192.67		
(ii) Loan to Perak River Hydro-Electric Power Coy. Ltd.	7,285,714.29		
		27,164,906	96
Investments, Specific Funds—			
Police Fine and Reward Fund ...	$ 39,148.04		
Public Officers' Guarantee Fund	338,739.21		
Malayan Flood Relief Fund ...	46,693.00		
Securities Deposits Account ...	9,078.06		
Phillips' Agricultural School Scholarship Fund	4,815.25		
Composition Stamp Duty Fund, 4½ per cent. Sterling Loan (with Crown Agents)	394,233.68		
		832,707	24
Family Remittances		1,644	62
Due by other Governments—			
Brunei	$ .95		
Ceylon	205.07		
Crown Agents	2,455.15		
Johore	10,453.05		
Kedah	4,545.33		
Kelantan	9,423.49		
Perlis	9,753.91		
Trengganu	4,162.96		
		40,999	91
Loans—			
Siamese Government (*b*) ...	$28,933,013.30		
Brunei	383,000.00		
Kelantan	300,000.00		
Planters	2,048,978.25		
War Service Land Grant Scheme	1,735,577.53		
Agricultural	24,548.38		
Buildings	282,285.02		
Miscellaneous...	864,187.19		
		34,571,589	67
Advances		86,058	07
Imprests		97,724	73
Bentong Tailings Retention Scheme		242,539	93
Stores and Materials Accounts—			
Post Office	$ 913,577.99		
P.W.D.	179,116.67		
Electrical Department	774,553.15		
Forest Engineer	2,370.85		
Marine Slipway	19,818.11		
Burma Rifles	110,757.77		
		2,000,194	54
Marine Slipway Account		3,941	31
Central Health Board		140,718	06
Minor Forest Produce, etc.		8,367	75
		77,593,800	29

NOTE :

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of the issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of Revenue.

(*b*) Repayment of the loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

(*c*) The 4½ per cent. Local Loan, 1959, has been fully subscribed and appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of Revenue.

Railways. The result on the year's working disclosed a deficit of $2,039,910 which was met from the general revenues.

Loan to Siam. The loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $28,933,013 on the 31st December, 1933, having been reduced by the payment of the tenth instalment due on 1st January, 1933.

Loan to Brunei. The loan to Brunei, which stood at $387,000 on 31st December, 1932, has been reduced to $383,000 by the payment of the annual instalment due in 1933.

Loan to Kelantan. The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1933.

Loans—Planters, War Service, etc. The total amount of loans outstanding on 31st December, 1933, was $3,784,556 against $3,959,413 on 31st December, 1932.

Other loans. Outstandings on 31st December, 1933, amounted to $1,171,021 compared with $1,319,000 on 31st December, 1932.

Purchase of tin. The balance on account of purchase of tin in July and August, 1932, which stood at $2,370,950 on 31st December, 1932, has been reduced by sales during the year to $51,665 and the latter sum, which represented the loss on the account, has been shared by all the Administrations in the agreed proportion.

Surplus. The surplus on 31st December, 1932, was $40,871,594. As the expenditure for the year exceeded the revenue by $3,059,865 the surplus was reduced to $37,811,729 on 31st December, 1933.

The liquid assets comprising cash, fixed deposits, Joint Colonial Fund and easily realisable investments (excluding the investments earmarked for certain specific funds) amounted to $11,090,187 at the end of the year as compared with $13,529,551 at the beginning.

The investments that are not easily realisable are those in Perak River Hydro-Electric Power Co., Ltd., and Sungei Draka Plantations, amounting in all to $1,312,221.

Opium Revenue Replacement Reserve Fund. This fund, which was started with $10 millions provided out of revenue in 1925 and $9,828,503 representing contribution of 15 per cent. of the annual revenue from chandu sales for the years 1926 to 1930 and which, together with the accumulated interest from inception to 31st December, 1930, stood at valuation on 31st December, 1932, at $26,631,355, has been increased to $27,164,907 on valuation of securities at current market rates on 31st December, 1933. The fund is invested in sterling securities, with the exception of £850,000 which has been lent to the Perak River Hydro-Electric Power Co., Ltd., as shown on the assets side of the balance sheet.

The interest earned on this fund during 1931, 1932 and 1933 has been credited to revenue and contribution to the fund during these years was suspended.

Rubber Experimental, Research and Propaganda Fund.

This fund which was created by an appropriation of $2,500,000 from surplus funds in 1930 and stood at $2,394,463 on 31st December, 1932, was reduced to $2,298,493 on 31st December, 1933. The commitments against this balance amounted to $1,565,714 on 31st December, 1933.

Sterling Loan Capital Account.

A statement of the Sterling Loan Capital Account is published as Appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on the Railway and other works up to 31st December, 1933, accounted for $73,808,477, leaving a balance of $489,072 still available to meet capital expenditure.

Local Loan Capital Account.

A statement of the Local Loan Capital Account is published as Appendix C to this report.

Of the total proceeds of $15,640,000, expenditure on Railway, Electrical and Public Works accounted for $10,056,480, leaving a balance of $5,583,520 still available to meet capital expenditure in 1934 and subsequent years. This balance is short of the estimated balance of $6,821,807 due to the acquisition of the power station at Sungei Besi by the Electrical Department.

The following is a summary of the Customs tariff:

IMPORT DUTIES.

Description of article.	Duty.	
	Full duty.	Preferential duty.
Ale, beer, stout, porter, cider and perry ...	$1.30 per gallon ...	$1.20 per gallon
Other intoxicating liquors	Graduated from $1.50 to $14 per gallon or proof gallon ...	90 cents to $10.50 per gallon or proof gallon
Tobacco	Graduated from 70 cents to $1.60 per pound	$1 per pound for cigarettes and manufactured tobacco if imported for sale to the public in airtight tins or containers
Petrol	35 cents per gallon	
Kerosene	15 ,, ,,	
Sugar	5 cents per pound ...	3 cents per pound

Description of article.	Duty.	
	Full duty.	Preferential duty.
Cartridges	$11 per 1,000	$10 per 1,000
Matches	Graduated from 12 cents per 100 containers and upwards	
Edible oils and fats	Graduated from 4 cents to 20 cents per pound	Graduated from 2 cents to 15 cents per pound
Cement	$12 per ton	$6 per ton
Cement manufactures other than tiles	$2 ,,	
Tiles—roofing, flooring and wall	$12 ,,	$10 per ton. Tiles—flooring and wall
Cosmetics and perfumery	50 per cent. *ad valorem*	25 per cent. *ad valorem*
Textiles and wearing apparel	20 ,, ,, or 5 cents per yard whichever is higher	10 ,, ,, or 2½ cents per yard whichever is higher
Boots, bootees, shoes, overshoes, slippers and sandals of all descriptions made wholly or partly of rubber, balata or gutta-percha	50 cents per pair	10 cents per pair
Rubber soles	25 ,, ,,	5 ,, ,,
Tanned hides and skins, leather and imitation leather and manufactures thereof other than fancy goods	15 per cent. *ad valorem*	5 per cent. *ad valorem*
Cycles and parts	20 ,, ,,	10 ,, ,,
Cycle tyres (outer covers)	15 cents per cover	8 cents per cover
,, ,, (inner tubes)	6 ,, per tube	3 ,, per tube
Motor and motor cycle tyres (outer covers) and inner tubes	20 per cent. *ad valorem*	Free
Pianos	10 ,, ,,	
Other musical instruments, wireless receiving and transmitting sets and parts thereof	20 per cent. *ad valorem*	10 per cent. *ad valorem*
Coffee	Graduated from 3 cents to 8 cents per pound	
Coffee extract or essence, whether mixed with other substances or not	5 per cent. *ad valorem*	
Ground-nuts	1½ cents per pound	¾ cent per pound
Milk	$5 for 100 lbs. nett weight	$1 for 100 lbs. nett weight
Fruits, jams, marmalade, vegetables, fish, meats and soups in metal, glass or earthenware containers	20 per cent. *ad valorem*	5 per cent. *ad valorem*

Description of article.	Duty.	
	Full duty.	Preferential duty.
Printing paper	10 per cent. *ad valorem*	Free
Manufactured brass, bronze and copperware	15 ,, ,, ...	5 per cent. *ad valorem*
Batteries for electric torches or hand lamps and parts thereof ...	20 ,, ,, ...	5 ,, ,,
All other electric batteries and parts thereof	15 ,, ,, ...	Free
Paraffin wax and articles made thereof	15 ,, ,, ...	5 per cent. *ad valorem*
Fish maws and sharks' fins	15 ,, ,, ...	5 ,, ,,
Umbrellas and lamp shades covered with silk, artificial silk or cotton	10 ,, ,, ...	5 ,, ,,
Tea	8 cents per pound ...	6 cents per pound
Saccharine	$5 per pound	
Fireworks and crackers ...	10 cents per pound	
Oil cloth and linoleum ...	10 per cent. *ad valorem*	
Straw, grass, rush and mengkuang (pandan) manufactures	10 ,, ,,	
Rice and padi—all varieties	15 cents per pikul	

Export Duties.

Description of article.	Duty.
Coconuts and copra	1½ per cent. *ad valorem*
An additional duty on all copra exported (levied for the purposes of copra research)	1 cent per pikul
Gambier	15 cents per pikul
Gutta-percha	2½ per cent. *ad valorem*
Rubber	1 per cent. *ad valorem* when price is under 30 cents per pound, to 5 per cent. when price is 80 cents or over In addition a further duty of 10 cents per pikul for the purposes of the Rubber Research Institute of Malaya. Subsequently reduced to 8 cents per pikul
Rembia ataps	10 per cent. *ad valorem*
Nipah ataps	Graduated from 75 cents to $1.50 per 1,000
Other kinds	10 per cent. of the wholesale prices in the centres of production
Getah rambong (India-rubber) ...	$5 per pikul
Formosa camphor	10 per cent. *ad valorem*
Kepong bark	10 ,, ,,
Gold	2½ ,, ,,

Description of article.	Duty.
Tin—	
Tin smelted or manufactured from tin-ore won in the Federated Malay States. When the price of tin does not exceed $67 (per pikul)	$23 per bhara (3 pikuls or 400 lbs.) and so on, the duty per bhara being increased by 50 cents for every dollar by which the price of tin exceeds $67
Tin-ore	72 per cent. of the duty on tin, with, in the case of tin-ore exported otherwise than under such guarantees as the Chief Secretary may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul
Additional duty on all tin-ore exported	10 cents per pikul or part of a pikul
Tin slag and hard-head of tin ...	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smelted or manufactured on the amount of tin estimated to be contained in such consignment
Scheelite and wolfram	$3 per pikul
All other metals and metalliferous ores	10 per cent. *ad valorem*
*China-clay or kaolin, potash-felspar or soda-felspar intended for use as a flux or a glaze or china-stone ...	2½ ,, ,,
Fish	Usually 10 per cent. *ad valorem*
Oysters, fresh	$5 per pikul
Blachan	50 cents per pikul
Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins ...	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,
Elephants	20 ,, ,,

EXCISE DUTIES.

Chinese samsu including medicated samsu	$9 per proof gallon
Other intoxicating liquors	$11 ,, ,,
Matches	9 cents per 1,000 matches where both matches and containers are made from imported timber
	8 cents per 1,000 where both matches and containers are made from local timber

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* These articles are prohibited to be exported except under licences granted by the Chief Secretary.

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance :

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVI.

Miscellaneous.

ELECTRICAL DEPARTMENT.

The general trade depression which characterised the previous year continued during the first half of 1933, but a slight improvement took place during the second half year owing to the higher prices obtained for tin and rubber.

Fluctuations in trading conditions soon reflect upon the consumption of electric energy as so many industries are dependent upon it for their motive power.

Towards the end of the year there were distinct signs of an upward trend in the consumption of electricity throughout the country, not only from Government supplies but from private undertakings as well.

It was mentioned in last year's report that in almost every supply area there had been an appreciable increase in the number of consumers and that the kilowatts of load connected per consumer had increased in spite of adverse conditions.

This continued during the year under review and points to the fact that additional plant will have to be installed at many of the stations in the near future.

As an example of the increase in load connected, the following figures for Kuala Lumpur are given, although the same evidence applies to all stations in the Federated Malay States :

	1929.	1931.	1932.	1933.
Kilowatts connected	10,500	14,549	17,810	18,280
Units generated	23,850,345	21,494,177	18,339,387	20,689,248

In the above figures, the year 1929 has been considered as a normal year, while the drop in units generated during the following three years indicate the severity of the trade depression; the increase during 1933 points to a slight recovery for reasons already mentioned.

During the early part of 1933, negotiations took place for the purchase by Government of the Ulu Langat hydro-electric power scheme of the Sungei Besi Mines Limited, and it was finally decided to purchase at a price of £200,000, with an undertaking to supply to the Sungei Besi Company up to 4,000,000 units in any year free of cost for 20 years, such free supply to be used for the working of the Sungei Besi Mines only.

This hydro-electric scheme was taken over by the Government as from the 1st April, 1933, since which date the Ulu Langat and Bungsar Power Stations have been supplying into a common system of interconnected transmission lines similar to the grid system in Great Britain.

It may not be generally appreciated that the electrical undertakings of this country have suffered materially by the introduction of "daylight saving" (20 minutes) from the 1st January, 1933.

It is estimated that Government undertakings alone have suffered to the extent of approximately $120,000 per annum in loss of revenue from lighting, which is a heavy burden for the Electrical Department to shoulder at a time of adverse trade conditions.

The total capacity of generating plant installed in the Federated Malay States shews an increase over 1932 of 8,735 kilowatts, but the total number of units generated fell from 144,222,885 in 1932 to 141,195,497 in 1933, a decrease of two per cent. only.

Of these units, 22,148,112 were generated by Government undertakings, and 5,020,056 were purchased by Government from private undertakings for public supply purposes, the balance being generated by private plants.

The number of installations generating electricity in the Federated Malay States is as follows :

Perak	88	Increase over 1932 ...	1
Selangor	34	,, ,, ...	2
Negri Sembilan ...	15	,, ,, ...	2
Pahang	7	,, ,, ...	0

Only six accidents due to electric shock occurred during the year as compared with nine in 1932, and of these, three were fatal.

COMPANIES.

COMPANIES ESTABLISHED IN THE FEDERATED MALAY STATES.

During the year 15 local companies with a total nominal capital of $2,648,000 were incorporated and registered as compared with 26 with a total nominal capital of $7,376,857 in 1932 and 22 with a total nominal capital of $8,748,769 in 1931.

The largest number of companies incorporated and registered in any recent year was 56 ($35,764,500) in 1926 and 54 ($38,934,928) in 1920.

The main objects of the new companies were : aviation (1), amusement and entertainment (1), general trading (1), oil manufacture and distribution (1), printing (1), patent medicine distribution (1), rubber dealing (1), rubber planting (2), rice dealing and general trading (1), tin mining (3), tin mining and rubber cultivation (1) and trust and agency business (1).

Thirty-seven companies were in voluntary liquidation and three in compulsory liquidation in the Federated Malay States. No winding-up orders were made during the year.

There were 663 companies on the registers at the end of the year, 19 having been struck off as dissolved or defunct.

COMPANIES ESTABLISHED OUTSIDE THE FEDERATED MALAY STATES.

Thirty-eight companies were brought on to the Federated Malay States registers in 1933 as compared with 27 and 21 in 1932 and 1931 respectively. The objects of these companies were briefly: agency and brokerage (1), boot and shoe manufacture and importation (1), building contracting and civil engineering (1), banking (1), chemical manufacture (1), general petroleum and oil trading (1), gold mining (1), general advertising (1), general trading (2), mining (1), manufacture and distribution of oils and lubricants (1) rubber planting (9), rubber dealing (8), rubber planting and mining (1), rice and oil milling (1), shipping (4), soap manufacture (1) and tin mining (2).

Eleven such companies were known to be in voluntary liquidation, but notification of the appointment of liquidators and receivers in the case of such companies has been compulsory only since the coming into force on 1st January, 1933, of Enactment 40 of 1932: there has not been sufficient time for accurate statistics to accumulate.

At the end of 1933, 1,002 companies were on the registers as compared with 1,017 on 31st December, 1932.

Ten fire insurance companies and twenty-five life assurance companies were on the registers as at 31st December, 1933, a decrease of five in the former category during the year.

COMPANIES LIQUIDATION.

Progress was made with liquidation of the companies in the hands of the Official Receiver. The liquidation of certain companies, the assets of which were situated in the Kingdom of Siam, gave rise to considerable difficulties, legal and otherwise.

BANKRUPTCY.

During the year, 338 bankruptcy notices and 127 bankruptcy petitions were filed, and 73 receiving orders and 72 adjudication orders made as compared with 554 notices, 190 petitions, 121 receiving orders and 123 adjudication orders in 1932.

Of the persons adjudicated bankrupt, 33 were Chinese, 24 natives of India, 15 Malays, 2 Ceylonese, 1 Eurasian and 1 European.

By occupation 18 were clerks, 16 traders, 13 landowners, five rubber-dealers, four miners, three money-lenders, two contractors, two tracers, two married women, one butcher, one watchman and nine of miscellaneous occupation.

Insolvency showed a marked decrease especially in Perak and Selangor. The main Bankruptcy Office is in Kuala Lumpur and the Branch Office in Ipoh.

Two compositions were accepted by creditors during the year. There were 20 discharges—11 in Perak, eight in Selangor and one in Negri Sembilan—of which one was unconditional and 19 subject to various periods of suspension.

There were two prosecutions against bankrupts during the year.

The gross liabilities and assets as stated by debtors were $1,180,013 and $691,668 respectively as compared with $3,698,692 and $3,680,619 in 1932. There were two failures with estimated liabilities of over $100,000 but under $150,000; one of over $150,000 but under $200,000 and one of over $200,000 but under $250,000.

Recovery of assets where these consisted of book debts was a very slow process : in many cases the debtors to estates in bankruptcy were themselves in financial difficulties and could seldom pay more than very small sums by monthly instalments. Where assets consisted of land these assets were generally subject to charge and realisation of such lands by sale rarely achieved anything more than satisfaction of the debts secured thereon.

The decrease in bankruptcies (so far as trade bankruptcies are concerned) is possibly to some extent due to improved trade and increased circulation of money : it is, however, mainly an indication that the really weak and irresponsible trading concerns have been eliminated and that the trading structure of the country is consequently now in a sounder condition generally. There are, however, indications of the existence of a heavy load of indebtedness, amounting in many cases to practical insolvency, among Asiatic salary-earners and among petty shop-keepers and small landowners.

DEPARTMENT OF THE PUBLIC TRUSTEE AND OFFICAL ADMINISTRATOR.

The year under review was the eleventh year of the working of the Department of the Public Trustee.

During the year the Public Trustee accepted 18 trusts in all valued at $228,500—21 trusts were wound up and at the end of the year 96 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at over $4,605,500.

The office of the Official Administrator, Federated Malay States, created in the year 1928, is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1933 was 28 valued at over $420,700; 23 estates were wound up and at the end of the year 40 were still being administered.

The total number of trusts and estates administered by the Public Trustee and Official Administrator at 31st December, 1933, was 136 valued at $5,200,000. The total fees collected by the combined offices during the year amounted to $21,932.

CO-OPERATION.

Expenditure. The total expenditure for the calendar year on all counts was $126,344.

Progress. The position at the end of the year was as follows:

——	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit Societies	62	1,652	75,159	40,027	128,776
Non-Agricultural Thrift and Loan Societies	27	10,948	2,408,700	227,539	2,643,439
Registered but not working	1				
Indian Estate Labourers' Societies	126	15,971	237,383	1,771	239,154
Registered but not working	2				
Co-operative Rubber Societies	2	74	402	231	671
Co-operative Union	1	6*	578	700	1,278
Total ...	221	28,645†	2,722,222	270,268	3,013,318

In addition, the following types of societies were registered and working, but had no regular financial transactions:

Type.	No.
General purposes societies—	
(*a*) Malay rural	8
(*b*) Indian settlers	2
Better living societies	4
Fairs	5
Sale and purchase society	1
Total ...	20

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* Societies. † Societies not included.

Rural Credit Societies.

Loans amounting to $3,744 were granted as compared with $6,249 during the previous 18 months. There was a slight decrease in the amount of overdue loans.

Owing to the low prices ruling for agricultural products, few members of rural societies had any surplus income out of which to repay their loans or add to their savings. In the rural areas efforts were chiefly centred in trying to develop a willingness to work together with a view to the production of a better product which could be jointly marketed.

Thrift and Loan Societies.

There was no change in the number of registered societies, the total membership of which increased by 128 from 10,820 to 10,948, the paid-up subscriptions from $2,331,900 to $2,408,700 and the reserve funds from $216,179 to $227,539. The amount of loans granted was to the value of $1,134,000 for the 12 months as compared with $1,894,800 for the previous 18 months. Overdue loans increased from $11,500 to $14,000.

Money invested in gilt-edged securities or held on fixed deposit amounted to $1,699,353 as compared with $1,713,939 on the 31st December, 1932. The gross average savings of members in these societies rose from $216 to $220 and the net average savings from $144 to $149.

Indian Estate Labourers' Societies.

Societies amongst Indian labourers were popular, and 35 new societies were registered, while two old societies were liquidated. The total number of registered societies amounted to 128 with a membership of 15,971 as compared with the 95 societies with a membership of 10,568 at the end of the previous year. The total subscriptions increased from $143,396 to $237,383 while the average savings per labourer remained practically the same, being $14.20 as compared with $14 previously.

Marketing Societies.

At the commencement of the year, the rubber societies then in existence ceased operation, as, owing to the low price of rubber, many members ceased tapping. At the end of the year, with a recovery in price, interest is again being manifested in this form of organisation.

Progress was made in the co-operative marketing of eggs. Eggs to the number of 278,430 were sold returning an average price of $1.92 a hundred to the members. This represents an increase of about 50 cents a hundred over the previous kampong prices.

Societies for the joint marketing of arecanuts and copra were under formation, but in view of the low prices ruling at the close of the year, it is doubtful whether much progress will be made in the near future.

LANDS.

The area in private occupation at the end of the year amounted to about 2,576,295 acres under agricultural titles and 203,585 acres under mining titles.

It is estimated that of the 27,500 square miles covered by the four States of the Federation, 15.8 per cent. is land in private occupation and 26.7 per cent. is reserved forest, while the balance of 57.5 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

The retrenchment measures of the past three years were reflected in the rate of expenditure of the Survey Department which reached a level in 1933 over a million dollars below that of 1930 and very substantially below the pre-war rate. The nett cost of the Revenue Survey Branch, which is responsible for all surveys for title, has been reduced, notwithstanding falling revenue, by nearly one half in two years. The demand for surveys of this nature, though rising gradually, is still somewhat below half that of the immediate pre-slump period.

In the Topographical Branch the sanctioned programme of retrenchment was completed. Its effect is very evident in the output for the year, only 1,044 square miles being surveyed for the one inch to one mile map against 2,365 square miles in the previous year.

The Map Producing Branch was fully employed throughout the year. The principal of its many publications was twenty one quarter degree sheets of the standard topo. map, which now covers 69 per cent. of the area of the Federated Malay States. That the wide range of maps available is appreciated is evidenced by the maintenance of sales (including official issues) at more than $20,000 per annum.

Routine meteorological observations were continued at the seventeen main stations and at a very large number of auxiliary stations. The station at Kroh was removed to the new Penang aerodrome and arrangements were completed for the removal in 1934 of the Singapore station from Mount Faber to the civil aerodrome now under construction at Kallang. Facilities for more rapid communication between meteorological and wireless stations were provided in order to meet the increasing requirements of the flying services. In addition to route forecasts before departure, aeroplanes in flight are now informed by wireless of existing conditions in the vicinity of the principal landing grounds.

GEOLOGY.

The geological survey of the Sungei Siput area was completed. Though its position near to the Kinta Valley might have warranted the hope, yet a detailed examination has shown that no important increase in mineral production can be expected. Alluvial tin-ore occurs in the basins of a number of mountain streams, where deposits are small in extent, and a few mines are operating in the deeper alluvium which lies on flat limestone country near the granite margin in the neighbourhood of Salak North and Sungei Siput, but the accumulation of alluvial tin-deposits has been much smaller than in Kinta.

A detailed geological survey of that part of the Malayan gold-belt which lies to the north of the Raub-Australian Gold Mining Company's Concession was begun, in order to see if an extension of lode-mining could be hoped for. It was found that a newly-mapped intrusion of granite-porphyry was the source of the gold at the Raub Mine, and that the lodes were located along a well-marked zone of strike-faulting. Evidence of similar faulting has been noted in folded strata outside the mining concession, but the country is low-lying, with bedrock covered by alluvium and soil, so that prospecting for lodes must be an expensive enterprise. It is probable that gold-quartz in quantity sufficient for mining dces occur, and that a moderate increase in the gold-production of Malaya may be looked for.

The services of the geologists were in demand by miners and by Government for reports on mineral deposits and engineering schemes. Progress was made with the compilation of a record of prospecting results. The usual analyses of metals, minerals, and oils were done for the public and for Government departments, though the absence on leave of the Chemist for part of the year hindered the prompt completion of some of this work.

PLANTERS' LOANS BOARD.

Agricultural loans.

On 1st January, 1933, the Board had outstanding twenty-eight loans aggregating to $819,150. It lent in new loans (three) and additional loans (two) during the course of the year a further $141,950; while three properties repaid their loans in full to the extent of $232,000, six others made partial repayments totalling $7,769 and balances not required by three estates $9,677 were written back.

At the end of the year, the number of agricultural loans remained the same as previously, viz. : twenty-eight totalling $711,654, against which $624,220 was actually outstanding.

Urban loans. Urban loans, at the beginning of the year, totalled ninety-one amounting to $1,037,075. During the course of the year, one new loan of $3,000 only was granted. Repayment in full was made by five borrowers totalling $17,260, while forty-nine others made partial repayments to the extent of $77,442. At the end of the year, the number of urban loans totalled eighty-seven aggregating to $945,373 and the amount actually outstanding was $923,993.

War service loans. Under the War Service Land Grant Scheme, at the beginning of the year seventy ex-soldiers were indebted to the Board, in respect of loans made to them, to the extent of $1,668,250. No repayments were received during the course of the year, the amount outstanding on 31st December remaining unaltered.

Interest. Interest earned during the year amounted to $129,322 of which $60,912 was in respect of agricultural loans and $68,410 in respect of urban loans. Interest in respect of war service loans was remitted as a measure of relief during the prevailing depression.

Interest collected totalled $132,054, while the amount credited to Federal revenue in respect of all monies outstanding was $122,617.

Profit and loss. The net profit earned by the Board during the year was $11,424.

Reserves. The reserves of the Board on 31st December, 1933, stood at $845,000.

Capital. The capital of the Board is $4,000,000 created by the Planters' Loans Fund Enactment, 1915.

ESTATE DUTY OFFICE.

The total of estate duty collected throughout the Federated Malay States in 1933 was $213,916 as against $194,667 in 1932 and $506,001 in 1931.

The collection of duty continued to be difficult. No unusually large estates were declared and the total value of solvent estates declared and assessed during 1933 was $4,207,945 as compared with $4,280,566 in 1932 and $8,371,166 in 1931. The decreased value of the estates did not cause any proportionate reduction in the volume of work involved in the examination of the estates.

The prevailing adverse economic conditions not only depreciated severely the values of property on which estate duty was leviable but also added very considerably to the volume of current work in the Estate Duty Office : in many cases the valuation of property presented serious difficulties and the realisation of the duty when assessed involved protracted negotiations and payments by instalments over long periods.

MILITARY.

The strength of the 2/20th Burma Rifles, stationed at Taiping, was

British officers	19
Indian officers	20
Indian other ranks	617

on 31st December, 1933.

This is a battalion of trained men and their standard of efficiency has been well maintained during the period under review.

The Experimental Company of the Malay Regiment, stationed at Port Dickson, started recruiting on the 1st February, 1933, with a first batch of 25 men.

More batches have since joined in accordance with plan and the strength of the company is now 115.

A further batch of 35 men, to be recruited on 1st February, 1934, will bring the company to its full strength.

The men are smart and keen. They take a great interest in their work and the organized games which form part of their recreational training. Although the progress made is quite satisfactory, it is too early yet to say whether the experiment is a definite success. The outlook is, however, most promising.

VOLUNTEERING.

Strength. There was a further decrease of over 70 in the strength of the Malay States Volunteer Regiment during the year, and the Vickers machine gun units in particular fell much below the desirable strength.

As a result of the reluctance of many of the younger men to join, there is unfortunately a high proportion of men over 40 years of age in the Regiment.

It is to be hoped that Government departments and civil firms will in future give definite encouragement to their young men to join and that they will grant facilities to them to attend camp. It is pointed out that unless some such encouragement is given the state of the Force in the next few years will be very serious.

Efficiency.

The Force has generally, however, increased in efficiency and is better prepared to carry out its role than it was before.

In Perak and Selangor the Malayan Volunteer Infantry have noticeably increased in efficiency during the year.

Reorganisation.

At the beginning of the year the Malayan Volunteer Infantry in all States were reorganised into two rifle companies each of four platoons. Owing to the necessity for economy, the numbers have, however, had to be limited.

Reductions.

Again for reasons of economy, the Permanent Staff has had to be reduced and one Company Sergeant Major and Instructor in Selangor, whose tour of duty had expired, and one in Negri Sembilan who was posted to the newly formed Malay Regiment, were not replaced. Furthermore the Adjutant of the Negri Sembilan Battalion carried out the duty of Adjutant to the Malacca Volunteer Corps in addition to his normal duty. This latter experiment has definitely proved a failure and will not be repeated.

Administration.

The amalgamation of the Administration of the Malay States Volunteer Regiment and Malayan Volunteer Infantry, which followed the reorganisation mentioned in my report last year, has proved eminently satisfactory.

This, and the centralised control of administration by the Head-quarters, Federated Malay States Volunteer Force, have enabled further economies to be effected.

GENERAL.

It is regrettable to have to record for the second year in succession the death of one of Their Highnesses the Rulers. His Highness the Yang Di-pertuan Besar of Negri Sembilan, Tuanku Muhammad, G.C.M.G., K.C.V.O., ibni al-Marhum Yam Tuan Antah, died at Sri Menanti after a short illness. His Highness ruled the State of Negri Sembilan for a period of 35 years, having been elected Yang Di-pertuan Besar in 1898. Throughout his reign His Highness proved himself a wise and enlightened ruler, ever mindful of the interests of his people, and by his death the Federated Malay States and the State of Negri Sembilan in particular have suffered a grievous loss.

Tuanku Abdulrahman ibni al-Marhum Tuanku Muhammad was elected as Yang Di-pertuan Besar of the State of Negri Sembilan on the 3rd August, 1933.

His Majesty the King was graciously pleased to confer the honour of Honorary Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George on His Highness the Sultan of Perak.

By the death of Raja Sir Chulan ibni al-Marhum Sultan Abdullah, K.B.E., C.M.G., Government has lost a wise and able counsellor, and the public of the Federated Malay States, and in particular the Malays, a true and genuine friend. Raja Sir Chulan until his death maintained his keen interest in public affairs and has left a gap which is hard to fill.

His Majesty the King was graciously pleased to confer the following honours at the New Year:

Honorary Companion of the Most Distinguished Order of St. Michael and St. George	His Highness al-Sultan Abu Bakar Ri'ayatu'd-din al-Mu'adzdzam Shah ibni al-Marhum al-Mu'tasim Bi'llah al-Sultan Abdu'llah, Sultan of Pahang.
Companion of the Most Distinguished Order of St. Michael and St. George	Arthur Frederick Richards, Esq., Malayan Civil Service (Governor of British North Borneo).
Commander of the Most Excellent Order of the British Empire (Civil Division)	Dr. Harold Augustin Tempany, Director of Agriculture, Straits Settlements and Federated Malay States.

On His Majesty's Birthday—

Companion of the Most Distinguished Order of Saint Michael and Saint George	John Strachan, Esq., lately General Manager and Chief Engineer, Federated Malay States Railways.
Honorary Commander of the Most Excellent Order of the British Empire (Civil Division)	Dato' Sedia Raja Abdullah bin Haji Dahan, Undang of Rembau, Negri Sembilan, and Member of Federal Council, Federated Malay States.

Member of the Most Excellent Order of the British Empire (Military Division)	Lieutenant Ernest James Kenneison, Federated Malay States Volunteer Force.
Member of the Most Excellent Order of the British Empire (Civil Division)	Elbert Seimund, Esq., Technical Assistant, Selangor Museum.
Companion of the Imperial Service Order	John Laird, Esq., lately Warden of Mines, Perak.
	Charles Hannigan, Esq., lately Commissioner of Police, Federated Malay States.
	Andrew Joseph Sheedy, Esq., lately Deputy Commissioner of Police, Federated Malay States.

Certificates of Honour were awarded to the following in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Raja Hussin bin Raja Abdul Manan;

Haji Ishak bin Abdullah;

Enche Abdul Jalil bin Haji Hassan;

John Hands, Esq.

A Durbar of Rulers of the Federated Malay States was held on the 24th July at Kuala Kangsar.

The Report of Brigadier-General Sir Samuel Wilson, G.C.M.G., K.C.B., K.B.E., to whose visit to Malaya reference was made in last year's report, was received early in the year and was subsequently approved by the Secretary of State and accepted by Their Highnesses the Rulers. Action is being taken to implement the recommendations contained in the report.

At the request of the local Governments Sir Basil Blackett, K.C.S.I., K.C.B., visited Malaya in order to enquire and report whether, and if so to what extent and under what conditions, the Malay States, Federated and Unfederated, should participate in the profits and liabilities of the Currency Commission of the Straits Settlements.

His visit was noteworthy for the fact that it was the first occasion on which a Commissioner from England has travelled *to and from Malaya by air.* He remained in Malaya from 17th November to 7th December. His report had not been received by the close of the year.

The waiver of all quit-rents in excess of $2 per acre, which was first granted in 1932, was continued in 1933.

Owing to the rise in the price of rubber and tin, the financial results of the year's working did not prove as unfavourable as had first been anticipated; but the efforts of Government to reduce its expenditure on the lines recommended by the Retrenchment Commission were unrelaxed, and the whole structure of the administration was exposed to the keenest scrutiny with the object, not merely of removing the unessential parts of the administrative machine, but of reducing the whole to the most simplified form necessary to carry on the work of Government. The Standing Retrenchment Committee sat at frequent intervals throughout the year and all retrenchment proposals were carefully considered by that body before being carried into effect.

Indications appear to show that at the end of the year the Federated Malay States had emerged from the worst of the slump. They cannot expect, however, the same measure of prosperity as they have experienced in the past and it is hoped that the need for wise and careful expenditure, which has been so forcibly impressed upon them in the last few years, will not be forgotten in the more prosperous times which the future will bring.

M. B. SHELLEY,
Acting Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
18th April, 1934.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,355	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	238,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584	84,660,975	201,393,405	349,012,595	67,041	15,424,409	261,352	4,312,922	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870	82,470,192	168,020,418	213,652,044	62,065	9,127,460	249,675	1,086,370	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659	62,163,328	106,201,211	125,177,183	51,250	5,502,101	243,886	547,411	4,832,700	12,912,579	1,723,117§	1931
1932	43,817,151	53,740,139	71,133,301	87,851,281	27,091	3,594,380	234,769	374,547	4,268,125	9,483,859	1,770,486	1932
1933	47,198,806	50,258,671	67,129,150	111,885,935	22,824	4,884,974	248,356	577,151	3,989,363	9,036,776	1,597,770	1933

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* As now corrected. ‖ Excluding bullion and specie. § *Vide* foot-note on page 102. † The figures for previous years included items now omitted owing to reclassification of revenue.

Appendix B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1933.

Dr. *Cr.*

	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments, 6 per cent. Loan	268,092 28			(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Interest on Deferred instalments, 4½ per cent. Loan	110,958 96	379,051 24		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Composition Stamp Duty, 6 per cent. Loan	552,321 42				
Composition Stamp Duty, 4½ per cent. Loan	360,000 00	912,321 42			
Discount on Issue Price, 6 per cent. Loan	1,325,571 43				
Discount on Issue Price, 4½ per cent. Loan	1,800,000 00	3,125,571 43			
Underwriting Commission, 6 per cent. Loan	441,857 14				
Underwriting Commission, 4½ per cent. Loan	360,000 00	801,857 14			
Commission for obtaining Underwriting, 6 per cent. Loan	110,464 29				
Commission for obtaining Underwriting, 4½ per cent. Loan	90,000 00	200,464 29			
Crown Agents' Commission, 6 per cent. Loan	110,464 29				
Crown Agents' Commission, 4½ per cent. Loan	90,000 00	200,464 29			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 6 per cent. Loan	108,049 28				
Brokerage to Sundry Brokers and Bankers on the allotment of Stock, 4½ per cent. Loan	89,355 00	197,404 28			
Miscellaneous—Stamp, etc., 6 per cent. Loan	5,873 21				
Miscellaneous—Stamp, etc., 4½ per cent. Loan	4,475 18	10,348 39			
Advertisement, 6 per cent. Loan	31,052 18				
Advertisement, 4½ per cent. Loan	29,630 03	60,682 21	5,888,164 69		
To Loan Works—					
Public Works Department	...	20,568,039 39			
Posts and Telegraphs Department	...	5,614,148 64			
Topographical Survey Department	...	763,362 66			
Topographical Survey of Forest Reserves ...	...	67,063 83			
Forest Department, Perak	...	31,727 95			
Railway—Open Lines and Construction ...	...	46,764,135 52	73,808,477 99		
To Balance ...	...	...	489,071 61		
			$80,185,714 29		$80,185,714 29

APPENDIX C.

F.M.S. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1933.

Dr.	$ c.	$ c.	Cr.	$ c.
To Expenses of Issue—			By Loan Subscription—	
(*a*) Discount on issue price ...	320,000 00		4½ per cent. issued at 98 in May, 1931	16,000,000 00
(*b*) Commission and charges ...	40,000 00	360,000 00		
To Loan Works—				
Railway Department...	2,955,909 36			
Electrical Department	3,551,768 05			
Cameron Highlands	700,389 46			
Water Works...	1,758,376 71			
Klang River Deviation	444,937 04			
Drainage and Irrigation	645,099 51	10,056,480 13		
To Balance	...	5,583,519 87		
		16,000,000 00		16,000,000 00

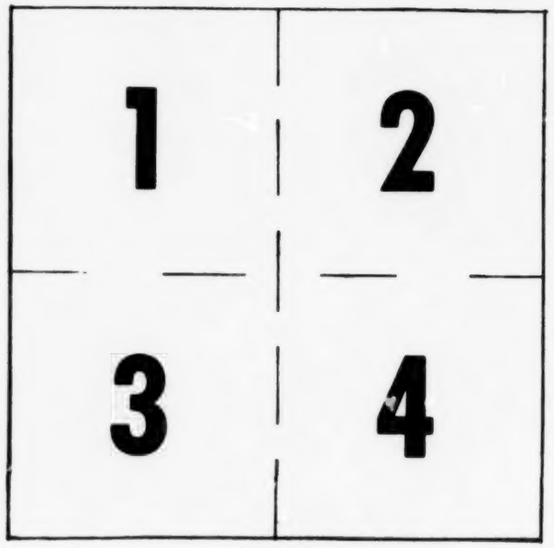
APPENDIX D.

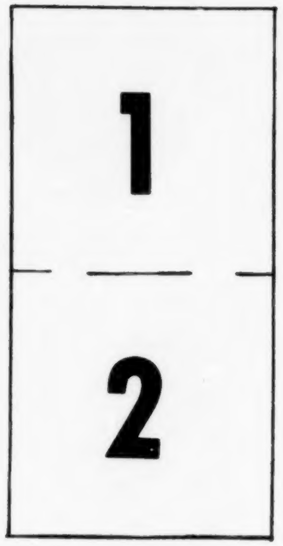
LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

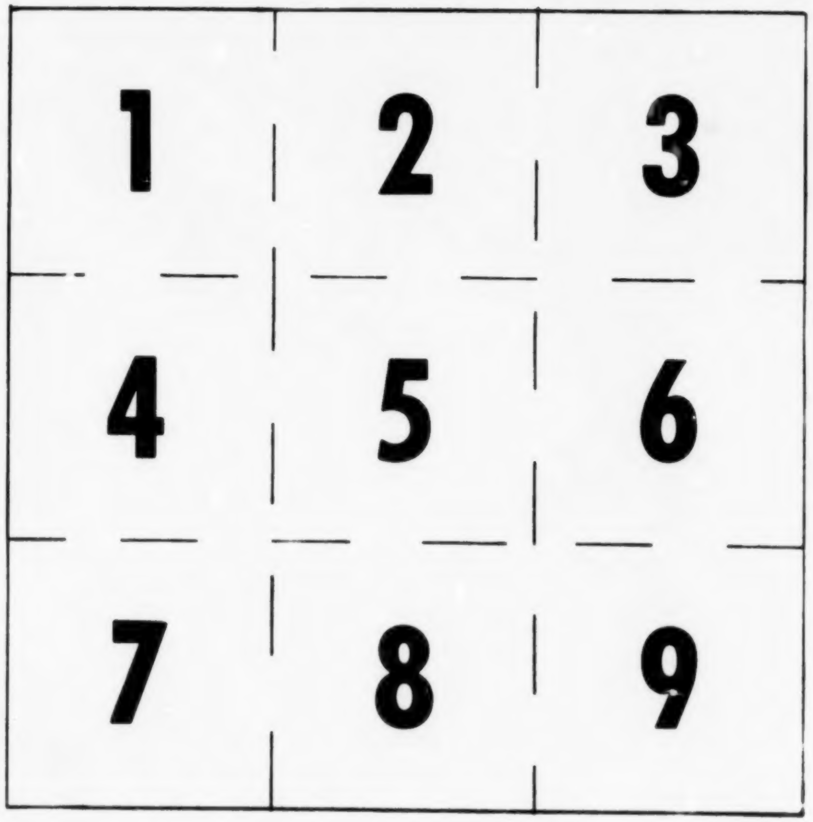
	Cost. $ c.	Where obtainable.
Census Report, British Malaya, 1931	5 00	Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of British Malaya	1 50	Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of Malayan Agriculture	1 00	Malayan Information Agency, 50, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 00	Printing Department, Kuala Lumpur, Federated Malay States.
Treaties and Engagements affecting the Malay States and Borneo	3 50	Printing Department, Kuala Lumpur, Federated Malay States.
Geology of Malayan Ore Deposits	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Geology of Malaya	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free	Malayan Information Agency, 57, Charing Cross, London.
Fisheries of British Malaya	5 00	Printing Department, Kuala Lumpur, Federated Malay States.
Commercial Timber Trees of the Malay Peninsula	5 00	Director of Forestry, Federated Malay States, Kuala Lumpur.
Report on the Wild Life Commission (Three volumes)	12 00	Government Printer, Singapore.

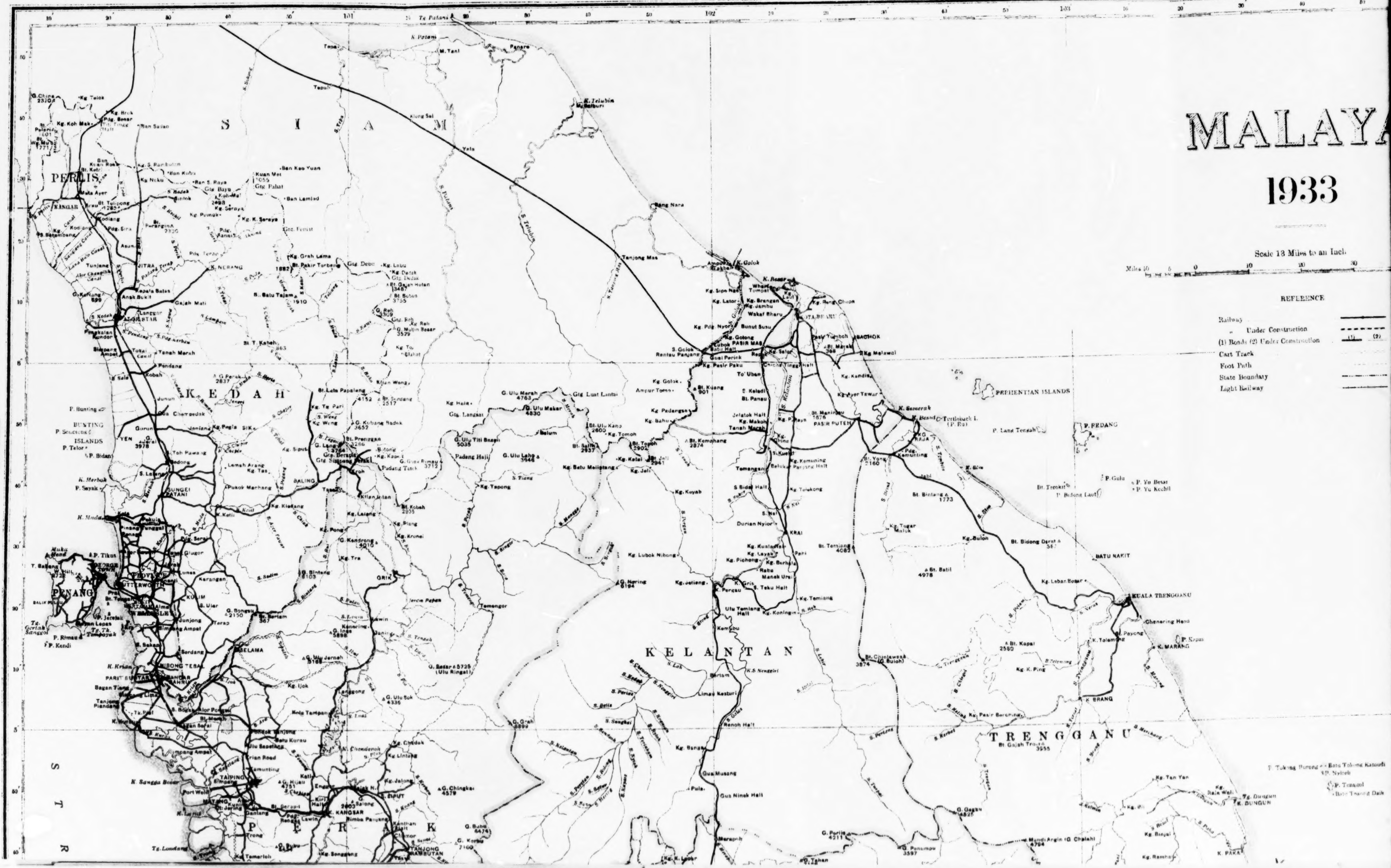
Federated Malay States Government Press.

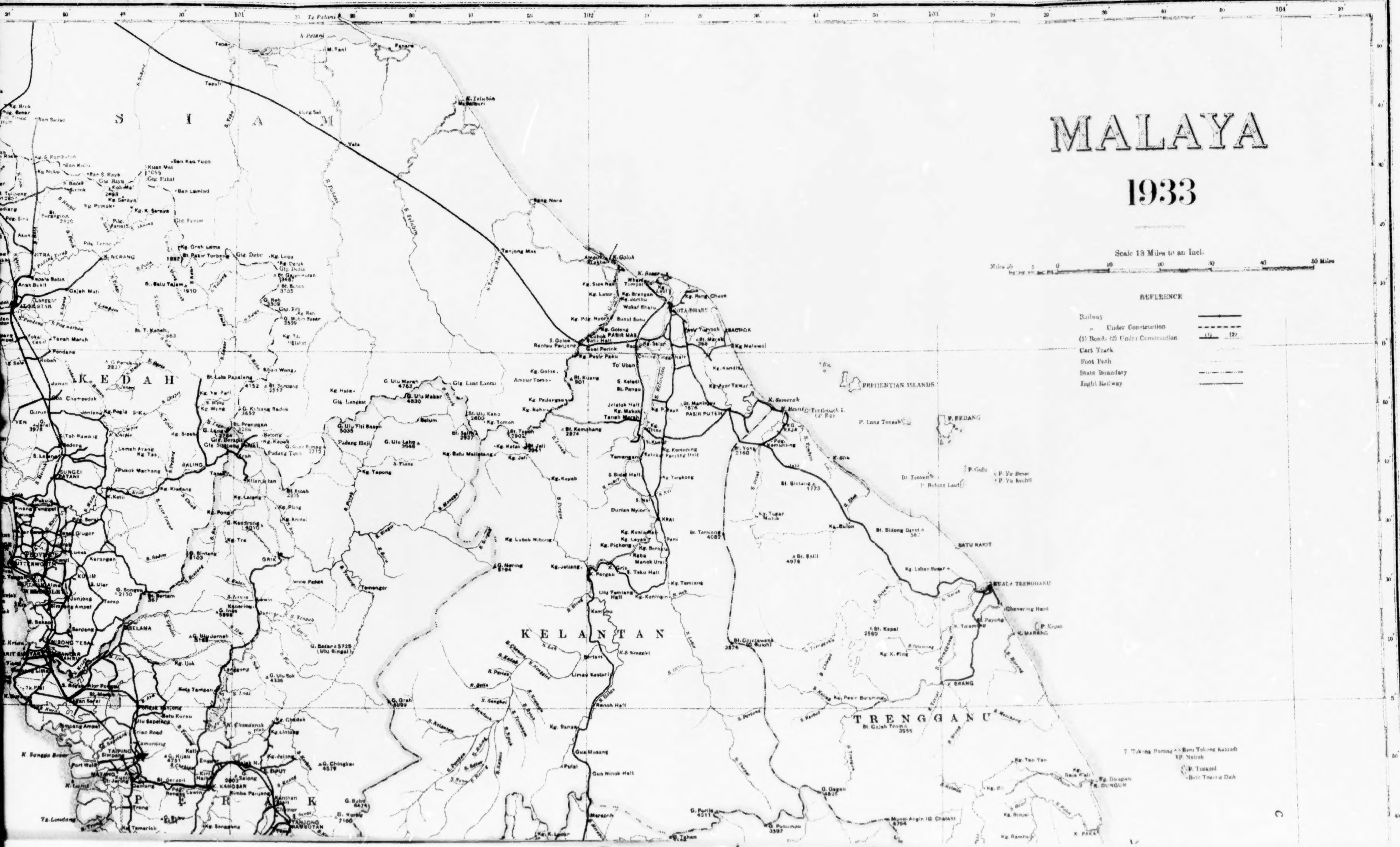
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.








MALAYA
1933
Scale 18 Miles to an Inch
Miles 10 5 0 10 20 30
REFERENCE
Railway
" Under Construction
(1) Roads (2) Under Construction (1) (2)
Cart Track
Foot Path
State Boundary
Light Railway
S I A M
PERLIS
K E D A H
PENANG
PROVINCE WELLESLEY
P E R A K
K E L A N T A N
T R E N G G A N U
PERHENTIAN ISLANDS
KOTA BHARU
KUALA TRENGGANU
ALOR STAR
SUNGEI PATANI
BUTTERWORTH
TAIPING
K. KANGSAR
GEORGE TOWN
S T R



MALAYA

1933

Scale 13 Miles to an Inch

Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Railway
" Under Construction
(1) Roads (2) Under Construction
Cart Track
Foot Path
State Boundary
Light Railway
101
102
103
104
S I A M
K E D A H
K E L A N T A N
T R E N G G A N U
P E R A K
Tg. Patani
K. Patani
M. Tani
Panare
Tepuh
K. Telubin
Klong Sai
Yala
S. Patani
S. Telubin
Bang Nara
Tanjong Mas
Ampuran
K. Golok
K. Besar
Wharf
Tumpat
Kg. Sipo Nasi
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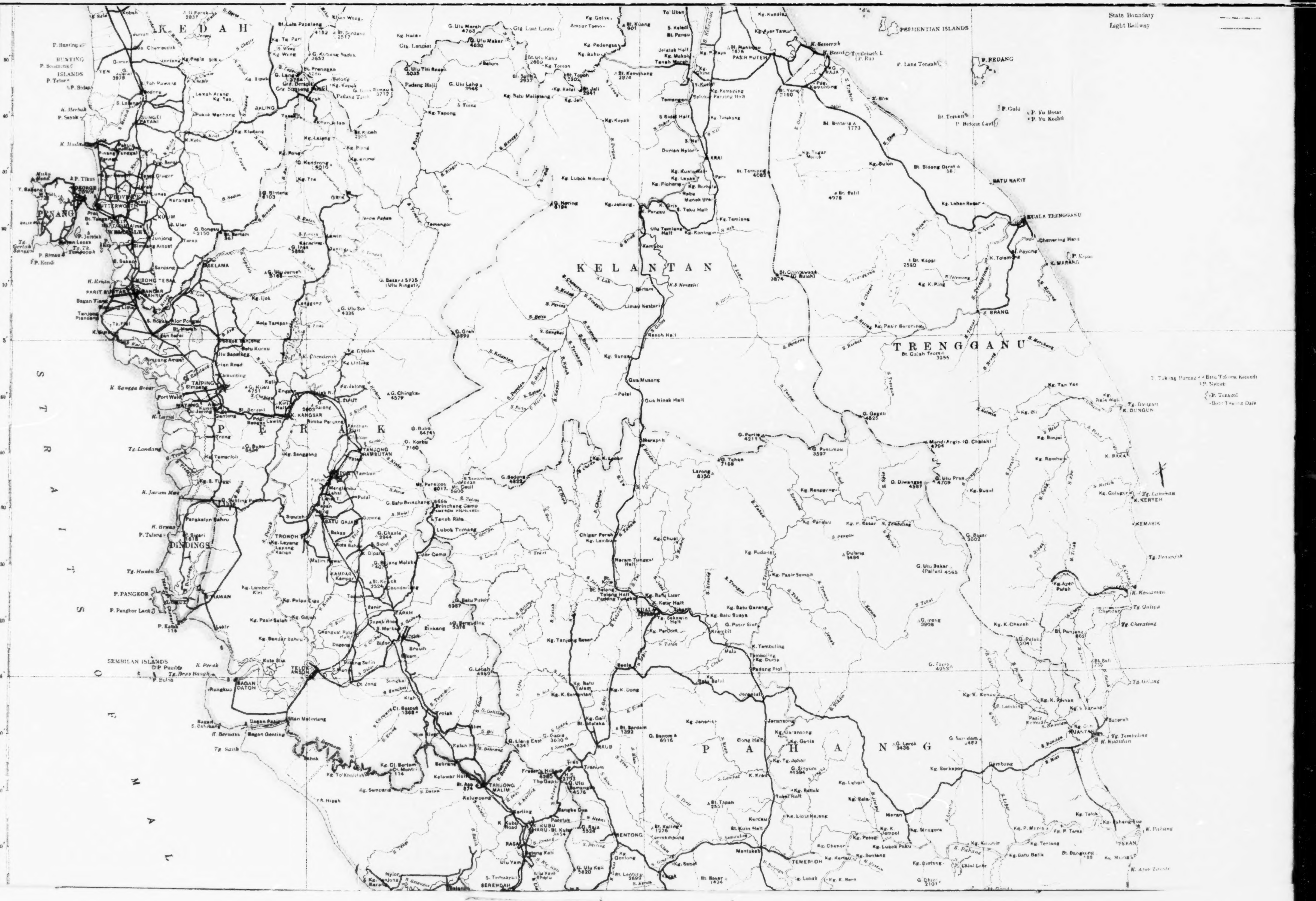
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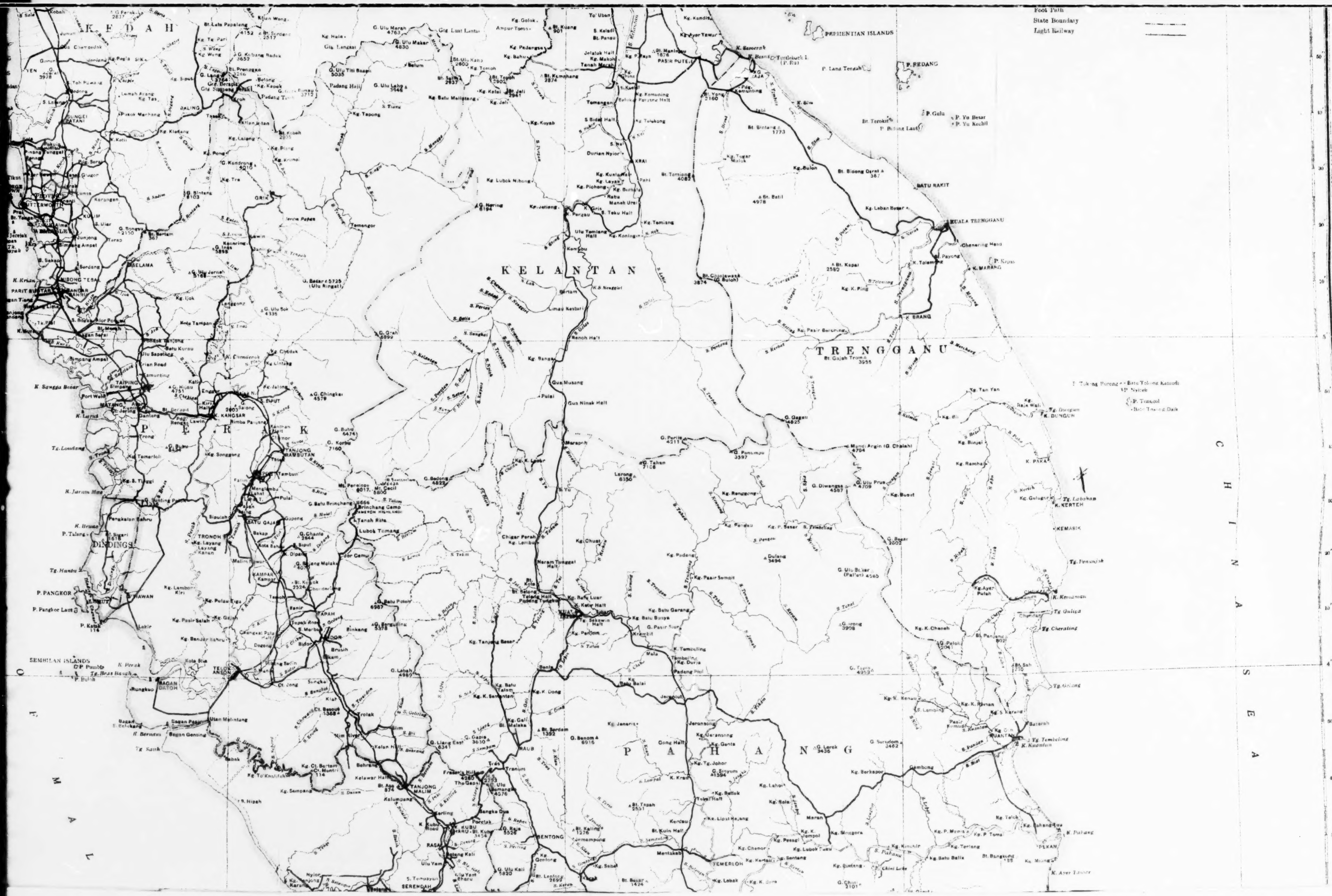

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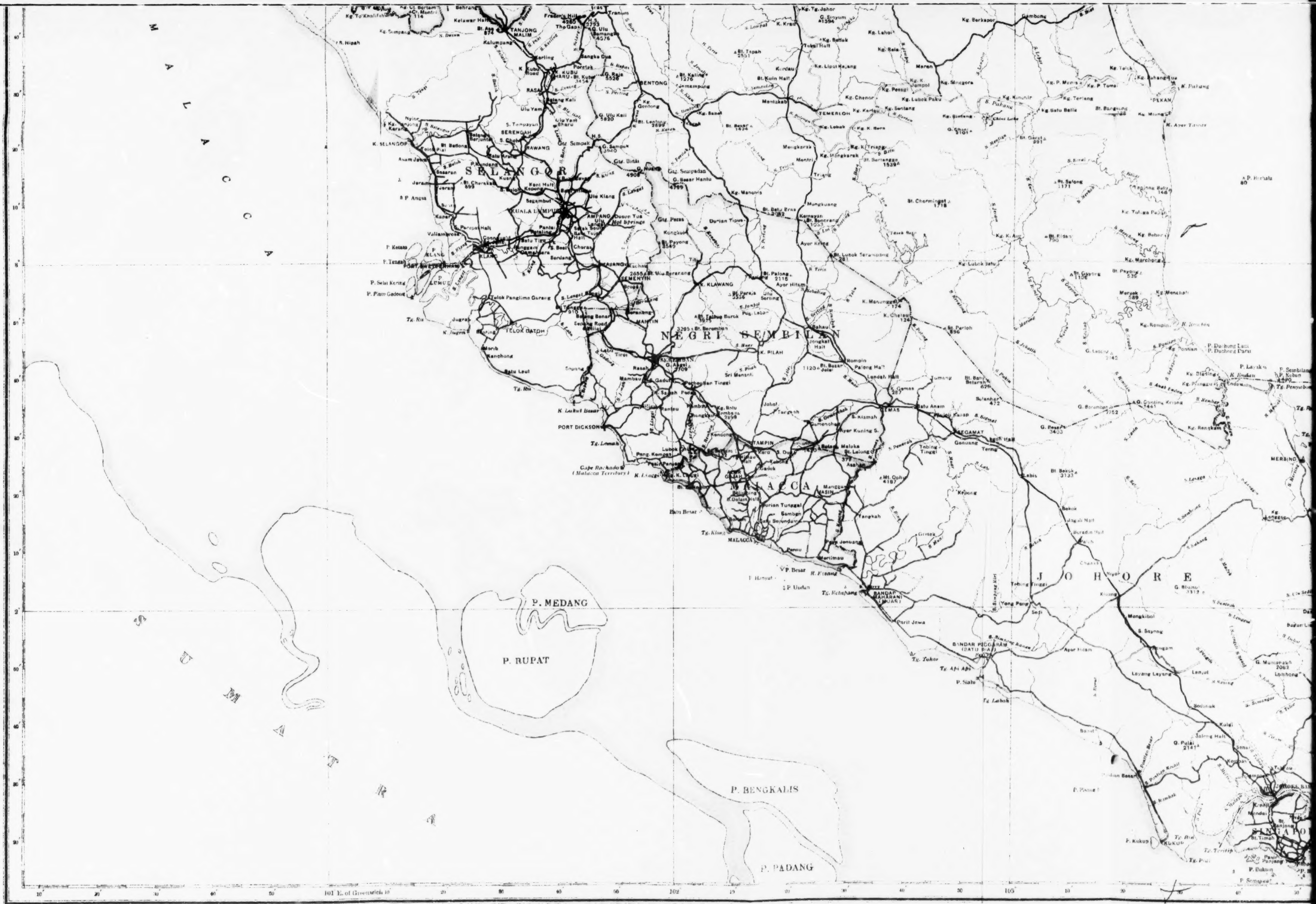
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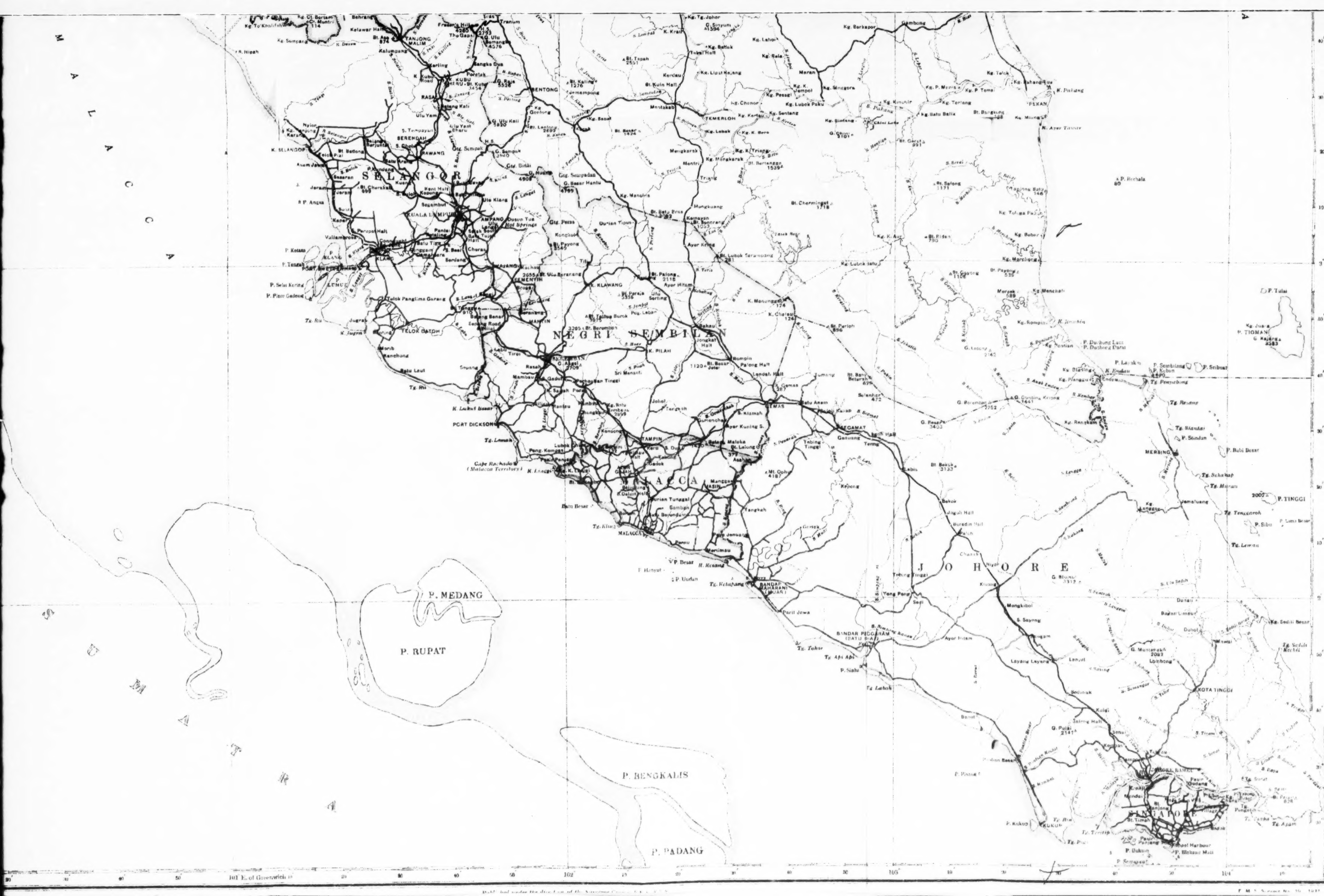
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FEDERATED MALAY STATES.

REPORT OF THE CHIEF SECRETARY TO GOVERNMENT FOR THE YEAR 1934.

CHAPTER I.

Geography, including Climate and History.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,800 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found.

Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom". The present Ruler is His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris.

SELANGOR.

Selangor (3,150 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,550 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D.,

Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungei Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungei Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Tuanku Abdulrahman, K.C.M.G., ibni Al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 14,000 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15°F. at coastal stations and between 15° and 20°F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December,

followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 236 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall ot this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 110 inches and Cameron Highlands 107 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 53°F. and at Tanah Rata 42°F. or only 10°F. above freezing.

CHAPTER II.

Government.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

The State Council of Negri Sembilan comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undang, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undang for amendment or confirmation, and assent is finally given by His Highness and the Undang. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State. The Federal Council, which was reconstituted in 1927, consisted in 1934 of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President; the Chief Secretary to Government, Federated Malay States; the four British Residents; the Legal Adviser; the Financial Adviser; the Adviser on Medical Services; the Controller of Labour; the General Manager for Railways; the Adviser on Education; the Commissioner of Customs and Excise; the Secretary for Chinese Affairs; the Adviser on Agriculture; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. It still retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 24 districts in each of which there is a Sanitary Board, a Licensing Board, and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The population of the Federated Malay States on the 30th June, 1934, was estimated to be 1,631,728, an increase of 33,958 on the figure for 1933 calculated by the same method. In estimating the population for 1934 the method of calculation by the balancing equation method introduced in 1933 has been continued. As explained last year, the figure thus calculated is reached after adding the excess of births over deaths and making allowance for the difference between the figures of emigration and immigration during the year.

The population figures for the four Federated Malay States in relation to the various races, calculated on this basis, have been supplied by the Registrar-General of Statistics, Straits Settlements and Federated Malay States. It is considered that by this means a more accurate estimation of the population is reached in a country such as Malaya which is subject to somewhat sharp fluctuations in respect of the numbers of the non-Malay inhabitants. The total population is swelled by immigration in times of prosperity and shrinks through emigration during a period of economic stress such as has been evident in the past four years. Under such variable conditions a population estimated on the basis of geometrical progression formerly adopted may be expected to give fallacious birth and death-rates subject, from year to year, to sharp fluctuations not altogether related to the actual incidence of births and deaths in the area affected. There is evidence that the normal wave of immigration had been resumed in 1934 and had sufficiently exceeded emigration to account for part of the increase in the population recorded.

The population represents:

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.	Total.
Perak	287,438	295,822	134,009	2,396	6,566	726,231
Selangor	131,007	224,991	133,939	2,856	10,428	503,221
Negri Sembilan	92.684	84,789	41.853	868	3,243	223,437
Pahang	116,332	48,375	12,288	384	1,460	178,839
Total	627.461	653,977	322.089	6,504	21,697	1,631,728

BIRTHS.

There were 57,697 births registered during the year, an increase of 910 or 1.6 per cent. on the total of 56,787 recorded in 1933.

The birth-rate was 35.4 per mille compared with 35.5 per mille in 1933.

The birth-rate increased slightly in the States of Selangor, Negri Sembilan and Pahang, and decreased in Perak.

Of the total births, 30,268 were males and 27,428 females, giving a birth sex ratio of males to females of 110 : 100, the same ratio as in 1933.

DEATHS.

Thirty-four thousand nine hundred and eighty-five deaths were recorded in 1934 compared with 32,340 in 1933, an increase of 2,645 or 8.2 per cent.

The crude death-rate was 21.4 per mille compared with 20.2 per mille in 1933 and 16.9 per mille in 1932.

The fact that the birth-rate remained almost the same as in the previous year while the death-rate showed an increase, indicates that the increased mortality is in all probability real and not dependent upon a statistical factor.

The death-rate for Malays was 23.7 per mille and again proved highest in Perak and lowest in Selangor. The non-Asiatic death-rate showed an increase from 2.5 per mille in 1933 to 3.1 in 1934.

The death-rate for the general population does not indicate any marked deterioration in the standard of public health as the increase in the death-rate is accounted for almost entirely by the higher infant mortality. The Registrar-General for Births and Deaths points out, however, that the infant mortality rate is one of the most sensitive indicators of changes in public health and tends to reflect conditions which may become evident in the rest of the population later.

INFANT MORTALITY.

The number of deaths of infants under one year of age occurring in each thousand infants born alive was 163 compared with 146 in the previous year.

The infant mortality increased to the extent of 17 per mille for the whole of the Federated Malay States and has now returned to the rate recorded in 1930. It is difficult to find any explanation for this increase. It is present in every State and in every nationality, except Indians in Negri Sembilan. Amongst the States, it is greatest in Pahang (increase of 36 per mille) and least in Selangor (7 per mille). In every State the increase is greater amongst Malays than other nationalities, there being an increase of 9 per mille for Selangor and over 30 per mille for the other three States. In Negri Sembilan and Pahang the increase amongst the Chinese also is noteworthy. This is not so evident in the other States.

There has been no change in the method of calculating the infant mortality, and there is no reason to believe that the effects of incomplete registration were any more evident than in other years. The increased mortality is greatest amongst the Malays who are more accurately registered and less affected by large movements of population than other races.

The suggestion that the higher infant mortality is due to bad economic conditions cannot be supported, since the increase coincides with a period of improving economic conditions. It is possible that the increased employment of mothers and the increased purchasing power which leads to artificial instead of breast-feeding may be a possible explanation, but this cannot be accepted as the sole or even the chief cause of the increase. The rise in infant mortality may be accepted as a portent that the unusually healthy conditions experienced during the past few years cannot be expected to continue indefinitely.

A comparison of the infant mortality rates of the following five towns offers an index of health conditions which is derived from known and reliable data:

Infant Deaths per Mille.

	1934.	1933.	1932.
Kuala Lumpur	147	146	133
Ipoh	95	98	91
Taiping	186	151	144
Seremban	177	170	183
Kuala Lipis	139	129	143

It is difficult to offer any explanation of the disparity between the figures for these towns in all of which Infant Welfare Clinics are functioning.

Table I.

Birth-rates in the Federated Malay States according to Races for the Period 1923-1934*, per Mille.

Year.	Malays.	Chinese.	Indians.	All races.
1923	36.0	17.8	20.2	25.3
1924	37.1	21.1	21.9	27.3
1925	36.1	23.3	23.5	28.1
1927	35.9	30.7	23.5	30.5
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	30.9	35.0	34.0
1933	39.3	33.1	34.6	35.5
1934	37.8	35.1	33.2	35.4

Table II.

Summary of Birth-rates in the Federated Malay States per Mille according to States and Races for 1934.

State.	Malay.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	36.5	32.5	30.9	17.1	16.4	33.6
Selangor	38.2	39.0	35.5	18.2	9.1	37.1
Negri Sembilan	42.6	32.0	33.5	6.9	6.5	36.2
Pahang	36.6	38.1	32.2	5.2	5.5	36.4
F.M.S.	37.8	35.1	33.2	15.5	10.7	35.4

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

TABLE III.

DEATH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1923-1934*, PER MILLE.

Year.		Malay.		Chinese.		Indian.		All races.
1923	...	24.6	...	23.5	...	24.9	...	24.1
1924	...	24.2	...	23.3	...	21.0	...	23.2
1925	...	22.6	...	23.9	...	22.8	...	22.9
1927	...	26.4	...	34.1	...	32.9	...	30.7
1928	...	24.4	...	30.6	...	30.2	...	28.0
1929	...	21.8	...	29.6	...	23.4	...	24.6
1930	...	20.4	...	30.4	...	21.8	...	24.1
1931	...	18.8	...	18.9	...	20.5	...	19.1
1932	...	19.1	...	18.3	...	18.9	...	18.5
1933	...	22.0	...	19.3	...	19.7	...	20.2
1934	...	22.1	...	20.9	...	19.7	...	21.4

TABLE IV.

SUMMARY OF DEATH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1934.

State.	Malay.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	25.4	21.2	20.6	5.9	10.4	22.6
Selangor	19.4	21.1	19.1	1.8	4.1	19.6
Negri Sembilan ...	24.4	19.0	18.3	2.3	2.5	20.8
Pahang	23.5	21.3	20.3	2.6	2.0	22.5
F.M.S. ...	22.1	20.9	19.7	3.1	5.6	21.4

TABLE V.

SUMMARY OF DEATHS FROM ALL CAUSES AT DIFFERENT AGES IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1934.

State.	Age Group.								Grand total.
	Under 1 year.	1-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	
Perak	4,012	2,607	833	552	1,228	1,539	1,532	4,135	16,438
Selangor	2,782	1,495	410	367	800	949	898	2,181	9,882
Negri Sembilan ...	1,377	659	188	171	372	475	445	956	4,643
Pahang	1,206	664	171	131	272	358	367	853	4,022
Total ...	9,377	5,425	1,602	1,221	2,672	3,321	3,242	8,125	34,985

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

TABLE VI.

SUMMARY OF INFANT MORTALITY RATES IN THE FEDERATED MALAY STATES ACCORDING TO STATES AND RACES FOR THE YEAR 1934, PER THOUSAND BIRTHS.

State.	Malay.	Chinese.	Indian.
Perak	192	135	163
Selangor	144	153	150
Negri Sembilan	180	182	122
Pahang	196	171	141
Average rate	181	151	151

TABLE VII.

INFANT MORTALITY RATES. ALL NATIONALITIES, 1934.

State.	Infant deaths.	Births.	Infant mortality rates.
Perak	4,012	24,405	168
Selangor	2,782	18,688	149
Negri Sembilan	1,377	8,093	170
Pahang	1,206	6,511	185
F.M.S.	9,377	57,697	163

TABLE VIII.

SUMMARY OF INFANT MORTALITY RATES (ALL STATES AND ALL RACES) IN THE FEDERATED MALAY STATES FOR THE PERIOD 1924-1934*.

Year.	Infant mortality rate per mille.
1924	181
1925	177
1927	203
1928	182
1929	178
1930	163
1931	139
1932	137
1933	146
1934	163

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

CHAPTER IV.

Health.

The general health of the people remained satisfactory during the year. It is interesting to record that the past three years, though characterised by severe economic depression, were remarkable for a steadily improving standard of public health. The improvement was accompanied by a decrease in the major causes of sickness such as malaria, beri-beri, dysentery, venereal diseases and to a lesser extent of pneumonia and tuberculosis. The number of admissions to Government hospitals has decreased during the past three years as follows:

1932	85,978
1933	76,297
1934	75,916

The decreased sickness rate and fewer admissions to hospitals during the past three years may be attributed mainly to the large exodus of Chinese and Indian labourers which resulted from the slump in the price of tin and rubber. The demand for Chinese labour on tin mines has been further curtailed since the application of the tin quota under the International Tin Restriction Agreement. The immigration of Chinese labourers has, consequently, been on a small scale during the past two years. There has however been a resumption of the immigration of Indian labourers since the latter part of the year. As prosperity returns, and the influx of Chinese and Indian labourers approaches more normal proportions, the standard of health may be expected to decline and the incidence of disease to increase. Experience supports the belief that many immigrants possess low powers of resistance against some of the communicable diseases prevalent in this country. It may thus be inferred that health statistics compiled for the past three years reflect the double advantage that many decrepit and sub-healthy labourers have left the country and until recently few susceptible immigrants have entered it. A portent that the resulting wave of improving health has already commenced to recede is to be found in the increased infant mortality during the year which has marred an otherwise satisfactory record of health. The infant mortality rate may be regarded as a sensitive index of general health conditions, and the sudden rise from 146 per mille in 1933 to 163 per mille in 1934 may perhaps herald a deterioration in the health of the adult population which will be reflected in the next annual statistics.

SUMMARY OF PRINCIPAL CAUSES OF DEATHS IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1934.

State.	Causes of Deaths.												
	Malaria fever definitely diagnosed.	Enteric fever.	Dysentery.	Small-pox.	Diphtheria.	Cholera.	Plague.	Cerebro-spinal fever.	Tetanus.	Tropical typhus.	Influenza.	Probable malaria and fever unspecified.	Tuberculosis of respiratory system.
Perak ...	334	20	169	...	24	...	...	1	54	7	13	7,241	531
Selangor ...	180	10	155	...	53	...	...	1	24	9	18	2,824	397
N. Sembilan ...	173	13	42	...	4	...	...	...	11	1	9	1,685	199
Pahang ...	74	3	21	...	1	...	...	...	10	...	...	1,937	164
Total ...	761	46	387	...	82	...	...	2	99	17	40	13,687	1,291

State.	Causes of Deaths.											
	Other forms of tuberculosis.	Syphilis.	Ankylostomiasis.	Cancer.	Beri-beri.	Diseases of the heart.	Other diseases of circulatory system.	Bronchitis.	Pneumonia (all forms).	Other diseases of respiratory system.	Diarrhoea and enteritis.	Other diseases of digestive system.
Perak	46	79	28	91	69	299	21	161	661	248	268	433
Selangor ...	31	39	24	62	135	240	40	348	659	56	506	186
N. Sembilan ...	3	5	2	24	75	104	10	150	341	5	176	50
Pahang ...	3	5	29	8	61	16	28	16	132	127	55	107
Total ...	83	128	83	185	340	659	99	675	1,793	436	1,005	776

State.	Causes of Deaths.									
	Convulsions.	Diseases of nervous system and sense organs.	Non-venereal diseases of genito-urinary system.	Diseases of pregnancy, child-birth and puerperal state.	Premature birth and diseases of early infancy.	Old age or senility.	Violence (all forms).	Leprosy.	Other causes.	Total.
Perak	2,122	133	136	248	373	1,092	244	9	1,283	16,438
Selangor ...	1,615	88	148	172	380	797	265	2	418	9,882
N. Sembilan ...	780	13	61	80	137	259	105	...	126	4,643
Pahang ...	401	14	107	62	164	174	84	...	219	4,022
Total ...	4,918	248	452	562	1,054	2,322	698	11	2,046	34,985

PREVAILING DISEASES.

Malaria.—There was a decrease in the number of recorded cases of malaria in all the States. The decrease was most marked in Negri Sembilan where 2,492 patients suffering from malaria were admitted to Government hospitals in 1934 compared with 3,308 in 1933 and 3,136 in 1932. Fifteen thousand seven hundred and eighty-six cases of malaria were admitted to Government hospitals during the year 1934 compared with 17,130 cases in 1933 and 16,449 cases in 1932. All cases of malaria admitted to hospital are accurately diagnosed and the number of such cases may therefore be regarded as a more reliable index of the incidence of the disease in the areas served by such hospitals than the number of deaths occurring outside hospital which are returned as due to this cause. The anti-malarial measures throughout the country have been maintained as adequately as the need for strict economy permitted. Should evidence accumulate of further recrudescence of malaria in any of the States, increased expenditure on anti-malarial measures will become necessary. The vigilance of the Health Authorities in Malaya has been stimulated by the occurrence of epidemics of malaria elsewhere and a strict watch has been maintained to detect and stamp out the first signs of any local epidemic. This is all the more necessary since experience has proved that the incidence of malaria shows a certain periodicity in its decline and recrudescence. There is every reason to believe that during the past few years Malaya has enjoyed a period of natural recession which has no doubt been accentuated by the extensive anti-malarial measures undertaken during recent years. It is hoped that when the country is due to encounter a natural increase in the incidence of malaria these protective measures will to an appreciable extent modify its severity.

Dysentery, Diarrhoea and Enteritis.—This group was responsible for 1,392 deaths or 4.0 per cent. of total deaths. In 1933 and 1932 the percentages were 3.7 per cent. and 4.3 per cent. respectively.

Pneumonia.—This condition was again responsible for the greatest number of deaths due to diseases of the respiratory system, and accounted for 1,793 deaths or 5.1 per cent. of the total. This rate is a slight increase on that for last year and a decrease for 1932, the figures being 1,566 deaths in 1933 and 2,335 in 1932.

Tuberculosis.—Tuberculosis in various forms was responsible for 1,394 deaths of which 83 were due to non-pulmonary disease, giving a percentage of 6.0 per cent. of total deaths compared with 1,409 deaths in 1933 and 1,627 in 1932. The problem of how best to combat pulmonary tuberculosis continues to engage the earnest attention of the Health Authorities and efforts at prevention are pursued in four main directions:

(*a*) EDUCATION.—Every endeavour is made by means of films, posters, leaflets, informal talks, etc., to educate the people in methods of cleanliness and personal hygiene with a view to avoiding infection and limiting its spread. This knowledge is being constantly imparted by Health Officers, Sanitary Inspectors, Health Sisters and Nurses and School Medical Officers.

(*b*) IMPROVEMENT OF HOUSING AND GENERAL SANITATION.—Persistent efforts are being made to improve the housing conditions of the poorer classes and every advantage is being taken wherever possible of the powers conferred upon Sanitary Boards to improve existing conditions. Regular inspection of the shop-house type of dwelling, where much of the tuberculosis is contracted, is carried out by the Sanitary Board staff to ensure that overcrowding is avoided.

(*c*) SPECIAL MEASURES OF SANITATION.—Preventive and curative measures against malaria and ankylostomiasis are carried out on a large scale and have the effect of improving the general health and raising the natural resistance of the people against infection by tuberculosis.

(*d*) HOSPITAL TREATMENT.—Beds for tuberculous cases are available in most of the Government hospitals but unfortunately admission to hospital is rarely sought voluntarily until the disease has advanced to a late stage. Most early curable cases, admitted, are detected by the Medical and Health Officers in the course of their duties, and for such cases facilities for modern medical and surgical treatment of tuberculosis are provided in the larger hospitals.

The following table presents figures which offer encouragement to persist on these lines:

Year.	Deaths from tuberculosis occurring in Government hospitals.	Ratio of deaths from tuberculosis per 100,000 population.
1924	1,037	73.1
1925	1,051	72.6
1926	995	67.4
1927	1,118	74.2
1928	1,074	70.0
1929	1,078	64.4
1930	1,061	61.5
1931	975	56.6
1932	919	51.9
1933	821	51.4
1934	894	54.1

Leprosy.—Sungei Buloh Settlement—There were 1,104 patients at the beginning of the year as compared with 1,082 for 1933. This number had grown to 1,320 at the end of the year. The total number of those treated in the Settlement during the year amounted to 1,693.

The Decrepit Settlement was evacuated of decrepits and absorbed by the Leper Settlement during the year to provide urgently needed additional accommodation for the latter. The rapid increase in t[illegible]ons for leprosy during the past few years is due mainly to the wide-spread confidence which the settlement has gained throughout the Federated Malay States amongst sufferers from leprosy. This is evidenced by the large numbers now seeking admission voluntarily. It is noteworthy that examination of recent admissions does not support the popular belief that leprosy is a disease confined to the poorer classes. Sufferers now admitted appear to represent all strata of the Asiatic community.

It is gratifying to record that 163 patients have been discharged bacteriologically negative and free from any signs of active external lesions. While this figure represents a very satisfactory result of the intensive treatment carried out at Sungei Buloh, there are one or two important points that invite consideration. The first is that the discharged patients were, when admitted, suffering from a mild or early form of the disease. The second is that the number of mild cases now admitted bears a smaller relation to the total admissions than formerly. There is therefore a steadily increasing yearly residue of permanent inmates which will swell in future years the numbers of advanced incurable cases. Furthermore, the percentage of discharges calculated on the total number resident may be expected to diminish as the residue increases from year to year. It is noteworthy that the percentage of Indians released during the year is very much higher than that of Chinese. It appears that leprosy occurring in Indians in Malaya is of a comparatively mild type, and it is found that Indians respond more readily and with happier results to treatment.

There has been a remarkable fall in the death-rate in the settlement during the past four years. The death-rate was 70 per mille in 1931 and has steadily declined to 30 per mille in 1934.

Treatment.—The routine treatment of leprosy has now been placed on a more satisfactory basis than formerly. The great majority of patients receive treatment with intramuscular or subcutaneous injections of ethyl esters of Hydnocarpus Wightiana oil. A total of 1,289 cases were so treated during the year. A total of 44,452 intramuscular injections were given compared with 24,374 injections in 1933. In addition 8,740 affected areas of skin were treated with intra-dermal injections. Care has been taken to ensure as great a measure of accuracy as possible in the assessment of results of treatment. Of 1,104 cases treated throughout the year there were:

Improved	871 cases or	79%
Stationary	145 ,, ,,	13%
Worse	88 ,, ,,	8%

General.—The morale of the settlement has been good throughout the year and the patients have amused themselves with the usual games, entertainments and social activities. It is found however that the treatment forms one of the chief subjects of interest amongst the patients and overshadows the other attractions provided to occupy their over-abundant leisure.

During the year 37 Malay patients from Pulau Pangkor Laut were transferred to Sungei Buloh and a special part of the settlement was allotted to them. A mosque is in process of erection. These patients have rapidly improved in health. They have eagerly co-operated in treatment and have been conspicuous in organising games and entertainments.

Kuala Lumpur Leper Asylum—This asylum is used solely for the accommodation of advanced and incurable cases. There were 330 patients at the beginning of the year and 268 at the end of the year, of whom 13 are non-smokers. Patients are permitted less freedom than at Sungei Buloh but they enjoy certain amenities and discipline is well maintained.

Venereal Diseases.—The number of patients attending the venereal diseases clinics has shown a steady decline during the past few years. The total number of cases of venereal disease treated in the Federated Malay States in each of the last six years was:

1929	40,802
1930	35,734
1931	31,817
1932	25,207
1933	23.176
1934	17,448

This satisfactory decline may be attributed to several factors but it is significant that it has been consistent and progressive since the policy of closing the known brothels has been pursued since 1929 onwards. Other factors which have been found to be coincident with a lessened incidence in other regions cannot, however, be ignored. To mention a few: (*a*) The provision on a large scale of facilities for free treatment which has quickly rendered many cases no longer contagious. (*b*) The economic crisis which has no doubt curtailed the number of visits to brothels. (*c*) The increase in the sex ratio of females to males amongst the Chinese. (*d*) The favourable effect of propaganda. (*e*) The exodus of a large number of labourers many of whom, especially the Chinese, were unmarried and particularly subject to venereal infection.

HOSPITALS AND OTHER MEDICAL INSTITUTIONS.

The following table shows the average daily number of patients in the hospitals of each State, the total number of patients admitted during the year, the total number of deaths and the death-rate per hundred admissions for the years 1933 and 1934:

State.	Average daily number of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1933.	1934.	1933.	1934.	1933.	1934.	1933.	1934.
Perak ...	1,308	1,210 ...	33,579	33,962 ...	2.911	2.863 ...	8.67	8.43
Selangor ...	976	880 ...	20,251	20,642 ...	1.616	1,640 ...	7.97	7.94
N. Sembilan	694	601 ...	13.004	11,845 ...	912	947 ...	7.01	7.99
Pahang ...	428	382 ...	9,463	9,467 ...	585	580 ...	6.18	6.12
Total ...	3,406	3,073 ...	76,297	75,916 ...	6,024	6,030 ...	7.89	7.94

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries), apart from those treated at special institutions such as infant welfare centres, venereal disease clinics, etc., was 607,643: the corresponding figure for 1933 was 645,974.

INFANT WELFARE CENTRES.

At the end of 1933 there were six Infant Welfare Centres and Ante-Natal Clinics at Kuala Lumpur, Klang, Ipoh, Taiping, Telok Anson and Seremban. In May of the year three centres were started in the State of Pahang, at Kuala Lipis, Kuantan and Pekan, and have already proved popular. The total number of attendances during the year at all the nine centres mentioned above was 179,908 compared with 182,800 in 1933.

The Infant Welfare Centres are in charge of a Lady Medical Officer, or a Sister, assisted by a staff of Asiatic nurses. Their chief functions are educational and advisory. Efforts are directed towards teaching mothers how properly to feed, clothe and care for their infants and many visits are paid to the homes of mothers for this purpose. By these means it has been found possible to overcome many of the ignorant prejudices which in the past have been so inimical to infant welfare. The unskilled village midwives are being steadily replaced and supplemented by midwives trained in the Government and other maternity hospitals. An attempt is also made by the staff of the centres to educate the unskilled women and restrain them from some of their more objectionable and injurious practices. The success of the centres is undoubted and a gratifying feature is the popularity they have gained amongst Malay women wherever they have been established. Every effort is being made to reduce the high infant mortality through the agency of these centres. It is hoped that the three centres opened during the year will strengthen these efforts.

CENTRAL MENTAL HOSPITAL.

The number of patients on the 31st December, 1934, was 2,550. The number resident on 1st January, 1934, was 2,506. The number of admissions from all sources totalled 881 compared with 798 for the previous year.

Males.		Females.		Total.
674	...	207	...	881

Eight hundred and six of the admissions came from the Federated Malay States and the rest from Kedah and Perlis.

The most frequent form of mental disorder admitted was confusional insanity with 397 cases. Senile dementia accounted for 146 cases; dementia praecox (primary dementia) for 109; melancholia for 48 and mania for 41 admissions.

Six hundred and nineteen patients were discharged during the year. Two hundred and eighty-eight patients were discharged as recovered. This is 32.69 per cent. of the admissions and compares somewhat unfavourably with the rate for 1933 which was 42.15 per cent. The proportion of those discharged as relieved is, however, correspondingly increased and is due to the continuation of the practice of early discharge. A larger number were discharged as unimproved than in 1933. These cases were removed at the request of relatives and this is usually done to give the patient native treatment (in some cases this may be psychologically sound) or to effect the repatriation of the patient when the relatives return to their own country. Of those discharged as recovered 191 out of the total of 288 cases were of confusional insanity which was the condition from which recovery was most to be expected.

One hundred and ninety patients died during the year. This total is 48 less than in 1933 and gives a death-rate of 5.61 per cent. on the total treated and 7.25 per cent. on the daily average number of patients in the hospital.

The general health of the hospital was good throughout the year. In September there was a small epidemic of influenza which was fortunately of a mild type and caused little inconvenience. The incidence of dysentery was low. This good result is the effect of the measures taken to improve sanitation in 1932 and 1933. The septic tank and automatic flushes at the male infectious diseases ward, which was built by hospital labour, is working well and has justified the money and time spent on it. There were 101 cases of malaria. This is about half the number recorded in 1933. The incidence, compared with the number of residents, is not regarded as alarming.

The farms have been fully occupied and the volume of produce has increased. All patients are supplied daily with fruit and vegetables produced on the hospital farms, none being bought from outside sources. All pork required for hospital consumption was produced on the hospital farm and surplus stock to the value of $1,000 was sold and the proceeds paid to revenue. The production of eggs and poultry increased.

DECREPIT SETTLEMENTS.

There were 624 inmates at the beginning of the year. The Federal decrepit settlement at Sungei Buloh was taken over for the accommodation of lepers in August to meet the need for increased accommodation in Sungei Buloh Settlement. Three hundred of the inmates of the Decrepit Settlement were transferred to the Kampar Hospital and the Decrepit Settlement at Taiping. Seventy-seven Chinese decrepits were transferred to Tampin Hospital. There were 279 decrepits accommodated in the decrepit settlements in Selangor.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment. Towns and villages which consist of a score or so of houses, but which are not Sanitary Board areas proper, are generally brought under modified control by applying some of the provisions and by-laws under Part X of the Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank-floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

Housing Outside Sanitary Board Areas.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part estate or mine managers and fairly well-to-do Asiatics, but their houses are as a rule of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Production.

MINERALS.

The year 1934 started with a very drastic adjustment of excess production of tin on account of assay values and other causes. The new agreement for the International Control Scheme came into force on the 1st January, 1934. Under this agreement the standard tonnage for the Malay States was determined at 71,940 tons of tin. This figure was based on Malaya's output for the year 1929, and by taking the true assay value of tin-ore, 74.7 per cent. for that year. Exports of tin from Malaya had hitherto always been based on an assay value of 72 per cent. tin. The assay values for Malayan ores from the inception of the Restriction Scheme had been as follows:

March—December, 1931	... ...	75.1 per cent.
1932	... ...	75.38 ,,
1933	... ...	75.47 ,,

The total overproduction, during this period, on account of assay values and other causes came to 1,031 tons. To enable the Signatory Powers to liquidate any excess production, a special quota of 4 per cent. was created, amounting in the case of the Federated Malay States to 2,878 tons. The ordinary quota for the period 1st January, 1934, to 31st March, 1934, was 40 per cent. of standard production. The total permissible exports for this period, therefore, represented a quota of 42.56 per cent. The corresponding domestic quota for the Federated Malay States was determined at 31 per cent. The period 1st April, 1934, to 1st July, 1934, started with the same international quota but with a domestic quota of only 30 per cent. in order to adjust a slight overproduction.

At a meeting of the International Tin Committee held on 2nd May, 1934, it was decided that a quota increase, amounting to 10 per cent. of the standard tonnages, should be given, with effect from the 1st April, 1934, for a period of six months. This retroactive quota of 10 per cent. created a mild panic amongst producers in the Federated Malay States as everyone required more labour of which there was not nearly enough available to go round. Materials for building "palongs" were also hard to come by. The effect of all this was reflected in Malaya's underproduction, at the end of June, of 435 tons. At a meeting of the International Tin Committee held on 13th August, 1934, the quota for the last quarter of the year was determined at 46 per cent. The domestic quota for the same period was fixed at 30 per cent., the domestic assessment having increased from 93,500 to 93,700 tons.

Tin Buffer Stock Scheme.—On 10th July, 1934, an agreement was signed by delegates of Bolivia, the Malay States, Netherlands Indies and Nigeria to form a Buffer Stock and to place their contributions of tin at the disposal of the International Tin Committee upon the understanding that such stock would be used as an adjunct to the International Tin Control Scheme.

The amount of Buffer Stock was determined at 8,282 tons of tin of which Malaya's share was 3,597 tons. Invitations to subscribe to the pool were issued in the form of a circular to all producers on 15th day of June, 1934. The amount was fully subscribed.

The "Buffer Stock Rules, 1934," were published in the Federated Malay States on 27th July, 1934. These provided for the issue of special Certificates of Production.

Buffer Stock Certificates of Production were issued for the period terminating on 31st October, 1934, at the end of which time 2,117 tons of tin had been delivered.

New Buffer Stock Certificates of Production to expire on 31st December, 1934, were issued for the balance of tin required which was fully contributed by the 31st December, 1934.

Visible supplies plus carry-over were as follows:

Date.	V.S. + Carry-over.
31st December, 1933	26,441
31st December, 1934	17,274

showing a reduction of 9,167 tons for the year under review. This does not include Buffer Stock.

The price during the year under review averaged £229.6.0 per ton and only fluctuated between £242.7.6 and £222.10.0 per ton. This stability is, of course, mainly due to the operation of the Control Scheme, but is partly attributed to the operation of a private pool.

The following table gives the prices ruling during the last seven years in dollars per pikul:

	1928.	1929.	1930.	1931.	1932.	1933.	1934.
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Highest	131.50	115.50	92.25	71.37½	81.75	124.00	121.00
Average	114.18	104.37	72.89	60.29	69.76	99.99	114.41
Lowest	103.63½	89.25	54.12½	50.37½	52.87½	71.75	110.62½
Fluctuation	27.86½	26.25	38.12½	21.00	28.87½	52.25	10.37½

The export of tungsten ores (wolfram and scheelite) of Federated Malay States origin was as follows:

	Wolfram.	Scheelite.
1933	33 ...	918 tons
1934	29 ...	1,508 ,,

The production of gold was 30,221 ounces compared with 29,036 ounces in 1933.

The Raub-Australian Gold Mining Co. Ltd. produced 24,310 ounces compared with 26,358 ounces in 1933.

Exports amounted to 26,156 ounces.

The production of coal from the Malayan Collieries Ltd., Selangor (the only producer), was 321,461* tons.

Consumption was as follows:

	Tons.
Sold to Federated Malay States Railways in Federated Malay States	114,967
Exported outside Federated Malay States for Federated Malay States Railways use ...	32,863
Sold to Mines in the Federated Malay States	82,505
Exported outside Federated Malay States for use in Mines	1,997
Sold to other consumers in Federated Malay States	24,176
Exported outside Federated Malay States for other consumers	39,191
Coal used in boilers at the Colliery	25,762
Total ...	321,461

The labour force engaged in mining (including dulang pass holders) was 64,183 at the end of the year. The figures for the preceding four years were:

1933	51,890
1932	53,430
1931	65,777
1930	89,517

This total does not include labour employed on the extraction and transport of firewood.

The classification of labour was as follows:

Contract	14,489
Wages	34,474
Tribute	5,533
Dulang	9,564
Individual licensees	123
Total ...	64,183

Contract labour constituted 22.57 per cent. of the total labour force.

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* Includes 44,487½ tons of old coal picked up from dumps.

AGRICULTURE.

Agriculture and mining continued to be the two mainstays of the Federated Malay States. Representatives of practically all nationalities are engaged in agriculture on properties ranging from the small holdings of any size between one-half and ten acres to large estates varying in extent from five hundred to several thousand acres.

Certain crops are grown on estates and on small holdings. These include the major permanent crops, rubber and coconuts, together with coffee, bananas, pineapples, tapioca or gambier, each of which may be grown as a catch crop with one of the major crops or may itself form the main crop; they also include tea which, however, occupies only a small area in Malaya. One crop, oil palm, is grown only on large properties. Other crops again are cultivated exclusively on small holdings by Asiatics. These comprise the important rice crop, minor food crops such as maize and ground-nuts, fruit, vegetables, arecanuts and tobacco.

A.—CROPS GROWN ON LARGE ESTATES AND ON SMALL HOLDINGS.

Rubber.—The International Rubber Regulation Scheme was announced on the 30th April and came into effect on the 1st June. Hopes of the introduction of this scheme and subsequent realisation of these hopes profoundly influenced rubber prices almost throughout the year, with the result that the average price per lb. of standard smoked sheet in Singapore for the year was 20.63 cents, or approximately double that of 10.21 cents in 1933. The opening price in January was 13 5/8 cents. During the next four months the price appreciated with increasing rapidity to 24¾ cents on 8th May. Rapid clearance of stocks during the few remaining weeks of unrestricted production caused a fall to 19 cents per lb. at the end of May. The price then rose steadily to a maximum of 25 5/8 cents in September, thereafter declining gradually to a closing price of 20¾ cents in December.

The introduction of the Rubber Regulation Scheme led to a revision of the statistics of the area planted with rubber on estates of 100 acres and over. Revised figures for small holdings have, however, not yet become available, so that those given below represent the 1933 figures with the addition of areas planted before the end of May, 1934. On this basis the total planted area at the end of 1934 was estimated to be 1.605.015 acres distributed as follows:

	Estates of 100 acres and over.	Holdings of under 100 acres.	Total.	Increase or decrease compared with 1933.
Perak	298.154	254,886	553,040	+27,272
Selangor	362.500	157,850	520.350	+22,352
Negri Sembilan	281,676	82,707	364.383	+ 8,025
Pahang	90.340	76,902	167,242	+24,088
	1.032.670	572,345	1,605.015	+81,737

The immature area on estates amounted to about 201,000 acres; that on small holdings is not known.

The area planted with budded rubber in these States amounted to 103,362 acres as compared with 89.162 acres in 1933. It was divided among 354 estates.

It is estimated that the new areas planted with rubber in 1934 were 9,000 acres on estates and 6.674 acres on small holdings. As no new alienations of land for rubber planting were made in 1934, the area planted was all on land previously alienated and such planting was all completed by 31st May, after which date further planting was prohibited under the Regulation Scheme.

The production of rubber during the past three years is shown below:

	Estates of 100 acres or over. TONS.	Holdings of under 100 acres. TONS.
1932	140,525	93,371
1933	137.363	110,848
1934	147,417	104.141

Practically all the rubber produced was exported.

Rubber Area out of Tapping.—The area partly out of tapping on estates amounted to about 110,000 acres at the end of the year, whereas in 1933 it was about 100,000 acres. The area entirely untapped on estates decreased from about 24,000 acres in December, 1933, to about 14,500 acres in December, 1934. The untapped area on small holdings fluctuated somewhat from month to month, but on the whole declined from some 45,000 acres in December, 1933, to about 41.000 acres in December, 1934.

Conditions on Estates.—With the improvement in price estates were able to make a profit. Part of this was in many instances used for restoring some portion of the previous cuts in salaries and wages and for undertaking such forms of maintenance work as had perforce to be discontinued during the period of low prices.

Small Holdings.—The number of small holdings left untapped decreased during the year, but the percentage of these fluctuated from time to time according to the supply of export coupons available and was further influenced, in the neighbourhood of rice lands, by the incidence of work in the padi fields.

The fear that insanitary conditions might result in a low assessment of production under the restriction regulations caused increased activity in cleaning up holdings that, as a result of past neglect, contained heavy undergrowth. It also led to somewhat improved control of diseases.

Diseases.—The prevalence of mouldy rot disease of the renewing bark varied as usual with the weather conditions. The scheme for rendering a few approved, cheap disinfectants available at cost price through village headmen and local agricultural officers met with varying success in different localities, as did other efforts to induce more efficient control of the disease.

Leaf mildew occurred fairly generally in Selangor and Negri Sembilan on the young foliage after wintering. On the whole, however, the attack did no serious damage. Sulphur dusting with a view to controlling this disease was undertaken on several estates, more especially in Negri Sembilan.

Recent investigations have revealed that in certain localities root diseases of rubber are doing more damage on small holdings than was supposed. Their control on small holdings presents special difficulties and the question of the best method of procedure is receiving attention.

The Rubber Research Institute of Malaya commenced to recruit a staff of Asiatic Rubber Instructors for work on small holdings throughout the country. The Instructors are employed by the Institute whence they obtain instructions and advice, but for the purpose of supervision are placed under the control of Agricultural Officers of the Field Branch of the Department of Agriculture in the various States. The Instructors give lectures and demonstrations on all aspects of rubber production, but pay special attention to tapping, control of diseases of the renewing bark and preparation of sheet of good quality. This last matter is of special importance to small holders under the Regulation Scheme, since for the purpose of export rights all rubber is considered to be dry, and in consequence a high moisture and dirt content in his sheets represents a direct loss to the small holder of a portion of his export rights. Some improvement on the quality of sheet produced on small holdings has already resulted from the work of these Instructors.

Coconuts and Coconut Products.—For reasons given in previous reports it is almost impossible to form even a rough estimate of the total production of coconuts in the Federated Malay States. Copra production was maintained in the well-defined blocks of estates and small holdings in the coastal districts of the States of Perak and Selangor and on a small scale on the east coast of Pahang. Owing to the low price of copra, however, there was a steadily increasing production of oil prepared by Malays from fresh nuts and sold for local consumption, this method of utilising the nuts being more remunerative than their conversion into copra. The trade in fresh nuts from coastal areas to those inland districts where local supplies are deficient continued steadily throughout the year.

In the western States the areas planted with coconuts showed no changes of importance, but in Pahang an increase of about 2,000 acres was recorded as a result of planting that has occurred since the census of 1930.

The estimated acreages in 1933 and 1934 were:

State.	Acreage, 1934.	Acreage, 1933.
Perak	109,264 ...	108,940
Selangor	110,366 ...	110,584
Negri Sembilan ...	5,966 ...	5,966
Pahang	17,162 ...	14,918

Local prices for coconut products during the year were the lowest on record. The lowest price quoted in Singapore for "Sundried" copra was $2.55 per picul in April and the highest price for the year was $3.30 per picul at the end of December. The average Singapore price for "Sundried" copra was $2.94 as compared with $3.89 per picul in 1933, while the corresponding prices for "Mixed" copra were $2.44 and $3.41 per picul. The local prices in the Federated Malay States were in most localities some 50 to 60 cents per picul below those in Singapore, the difference representing transport and handling charges.

The total production of copra in the Federated Malay States is not known, as there are no records of the quantity used locally for oil production. Net exports, however, amounted to 73,289 tons, a decrease of over 13,200 tons on the exports for 1933. In 1934 exports of oil were 91 tons and of oil cake 768 tons as compared with 131 tons and 1,289 tons, respectively, in 1933.

While copra produced on estates is almost entirely exported as such, an annually increasing proportion of that produced on small holdings is converted into oil and cake within the Peninsula for local consumption and for export. The quantity of oil produced in Malaya and exported again showed a marked increase from 17,582 tons in 1933 to 25,485 tons in 1934. This increase is attributed in the main to the prevailing low price for copra, but in part to the increased demand for oil cakes for stock feeding in many countries. The average price of coconut oil was $5.96 and that of copra cake $1.28 per picul in Singapore as compared with $7.70 and $1.65, respectively, in 1933.

In the circumstances described, the coconut and the oil palm industries were faced with such serious difficulties that His Excellency the Acting Governor and High Commissioner appointed, on the 21st April, a Committee to investigate and report on the present economic condition of the coconut and other vegetable oil producing industries and to make recommendations. The report of the Committee was published in September and showed that the position had arisen from a rapidly increasing world production of interchangeable vegetable and animal oils and fats during a period when several factors, both natural and artificial, tended to restrict their free exchange and consumption. The Committee made a number of recommendations to several of which effect has been or is being given, those affording more immediate relief to the two industries being remission of export duty on copra and reduction of quit-rents on lands planted with coconuts or oil palms.

At the close of the year, however, the interaction of certain unforeseen factors, notable among which was the prolonged drought in the United States, considerably reduced actual and potential supplies of oils and fats and thereby improved the immediate outlook for copra and palm oil.

Prevailing prices did not encourage Malays to produce copra of improved quality, nevertheless four new kilns of the approved type were erected in Krian district on which copra was prepared which realised the current price on the Penang market for first quality copra. In certain other areas in Perak and Selangor the provision of more direct methods of marketing and competition between buyers for the improved product have enabled Malays to secure a fairer price for well-dried copra.

At the Coconut Experiment Station in Selangor, the Department of Agriculture again gave courses of training in the preparation of good quality copra to students at the School of Agriculture, Malaya, and to Malay headmen from various parts of the country.

The standard series of manurial and cultivation experiments which have been in progress since 1931 on seven estates in the Straits Settlements and the Federated Malay States were concluded. It was found that no results of economic importance were to be expected from manuring or cultivation on normally well-maintained properties.

Pineapples.—The area planted with pineapples decreased to 9,336 acres as compared with 9,789 acres in 1933. This was attributed mainly to the removal of catch-crops of pineapples from fields of maturing rubber trees. Of the total planted area 6,983 acres were in Selangor, the only State in which the fruit is tinned for export. In the three other States the fresh fruits are all sold for consumption in Malaya.

The two canning factories in Selangor, under the same Chinese ownership, continued in operation throughout the year, one being provided with new processing plant. Practically the whole output of these factories is exported to the United Kingdom or to Canada. Exports for the year were about 294,800 cases as compared with about 244,700 cases in 1933.

The average prices of canned pineapples for 1934 were about the same as for 1933, but the fluctuations in 1934 were smaller. For a case of 48 tins (72 lbs. of fruit) the average prices were: Cubes $3.10; Sliced Flat $3.01; Sliced Tall $3.19.

Experiments on the cultivation and manuring of pineapples when grown as a main crop yielded results which, although not conclusive, provided guidance in designing the further experiments which were laid down during the year. Good progress was made with experiments on green manuring and close planting, with varietal trials and with selection of plants producing fruits of a good size and shape for canning. This work is being conducted both on the Central Experiment Station in

Selangor and at the Pineapple Experiment Station maintained jointly by the Governments of the Straits Settlements, Johore and Selangor in Singapore Island.

In Selangor the Pineapple Industry Enactment, 1934, came into force in July and the rules thereunder in October. The Enactment and rules are on the same lines as the legislation which was brought into force in the Colony and in the State of Johore during the last quarter of the year. They require the registration of all factories where pineapples are canned for export and make such registration subject to compliance with the requirements of the local health authority in respect of factory hygiene and general sanitation.

Each factory is further required to register a special mark which must be embossed or indelibly stamped on all tins and cases of tins for export, so that the tins or cases can be traced back to the factory in which they were prepared.

The Enactment also makes provision for a system of grading. The principle of a voluntary grading scheme and the main details of proposed grades were accepted by the industry during the year. The details of the scheme remain, however, to be decided in the coming year.

At the close of the year a scheme for providing research and advice on the canning side of the industry for a period of three years was approved by the Governments of the Colony, Johore and the Federated Malay States. The scheme will be financed by these three administrations with the aid of a contribution kindly granted from the Colonial Development Fund.

Although the pineapple industry in Malaya as a whole has well maintained its leading position on the market in the United Kingdom and improved its position in Canada, competition from several directions is steadily increasing. It is with a view to meeting this competition that the measures described above have been formulated.

Coffee.—Further declines in the average prices for coffee on the Singapore market rendered the cultivation of this crop even less attractive than in 1933. Nevertheless, the area planted in the Federated Malay States was 9,520 acres or slightly more than in the previous year. While net imports of coffee beans into Malaya in 1934 showed some increase compared with those of 1933, the net imports of coffee in tins have shown a marked and steady decline since 1929. This fall would appear to be due in part to an increase in the retail sale of coffee grown in Malaya and in part to the roasting and tinning for local consumption of coffee prepared from blends of imported beans.

There were further imports of Arabian coffee seed from India and Jamaica for planting on Cameron Highlands. The total area planted on the Highlands at the end of 1934 was 299 acres as compared with 260 acres in 1933. There were several good nurseries of seedlings in readiness for further planting.

Two samples of Arabian coffee from the Tanah Rata Experimental Plantation sent to London early in the year were valued at £3 10*s*. and £3 15*s*. per cwt., respectively, when the prices for "Indian Assortment" were £3 6*s*. 4*d*. to £3 9*s*. 9*d*.

The coffee berry borer again proved troublesome in some localities in the lowlands.

Tea.—A careful estimate of the area planted with tea in the Federated Malay States has recently been made. This shows a total area of 1,953 acres, being an increase of 177 acres. Of this total 840 acres were on upland estates, mostly in the vicinity of the Cameron Highlands, 631 acres were on lowland estates in Perak and Selangor and 482 acres were on small holdings owned by Chinese in Selangor and Negri Sembilan.

At the end of the year six estates were making black tea of which two in the uplands were selling their produce in London and four in the lowlands were supplying the local market. The retail price locally for this tea varied from 45 to 65 cents per lb. according to grade, although the green tea of inferior quality made on small holdings was retailed at about the same prices.

The total local production of tea is not known, but records on the Government Experiment Stations at Serdang and Tanah Rata show that with moderate applications of fertilisers yields from mature bushes in the lowlands of at least 900 lbs. per acre, and from bushes about six years old in the uplands of 600 lbs. per acre may be expected.

Four commercial consignments of tea from the Tanah Rata Experiment Station, Cameron Highlands, were sent to London for sale at approximately quarterly intervals during the year. The consignments totalled 298 half chests containing some

18,000 lbs. of tea. The last consignment did not reach London before the end of the year, but the other three were sold at auction at an average price of 1*s*. 0.58*d*. per lb. for all grades of all consignments, as compared with the following average prices for Indian teas on the corresponding dates: Indian Northern 1*s*. 1.04*d*., Indian Southern 1*s*. 0.81*d*.

An up-to-date factory was completed on one upland estate and the first consignment of tea, obtained entirely from young bushes, sold in London for an average price slightly below that obtained on the same date for the tea from the Experiment Station.

The tea from the Central Experiment Station, Serdang, was all sold locally. The general evidence from other sources, however, indicates that Malayan lowland tea is superior to Java and Sumatra teas and nearly equal to South Indian teas. The local upland tea ranks with South Indian or Medium Ceylon teas.

Experiments on the pruning and manuring of tea were continued at both the Government Experiment Stations.

Derris.—Interest in the cultivation of this plant is increasing in consequence of the rise in price occasioned by an active demand for dried root by manufacturers of insecticides in Japan, the United States and the United Kingdom. The total area planted in the Federated Malay States was 715 acres comprised in a few estates and numerous Chinese-owned small holdings.

The dried root is now sold on two different bases of toxic content, namely, rotenone content for the American market and ether extract value for other markets. The price on the basis of rotenone content rose from $30.50 per picul at the beginning of the year to $44 per picul at the close; while the price of root sold on the ether extract basis opened at $24, rose to $34.50 and closed at $30 per picul.

Recent work in the local Department of Agriculture and elsewhere provides evidence which indicates that a high toxic content is an inherent character of certain varieties of derris, while others possess only a low content and are of little commercial value.

An extensive series of investigations on the action of derris root as an insecticide was concluded at the Department of Agriculture and lent support to the view, now receiving general acceptance, that the insecticidal value of the root does not depend only on its rotenone content but is more accurately indicated by its ether extract figure.

B.—CROPS GROWN ENTIRELY ON LARGE ESTATES.

Oil Palms.—The total area planted with oil palms at the end of 1934 was returned as follows:

	Acres.
Perak	17,405
Selangor	13,592
Negri Sembilan	1,422
Pahang	797
	33,216

This represents an increase of 298 acres in the year divided between all the States except Perak.

All the oil and kernels produced were exported with the exception of small quantities of oil used in the local manufacture of soap. Production of oil increased by over 3,600 tons to 12,965 tons and of kernels by some 400 tons to 2,013 tons. The average price of palm-oil, however, declined from £16 *3d.* in 1933 to £12 *9s.* *3d.* in 1934 owing to the same causes as were responsible for the decline in the price of copra.

Mention has already been made of the steps taken to assist the two vegetable oil industries in overcoming their difficulties. It may, however, be added that the outlook for palm-oil in the coming year showed an even greater temporary improvement than did that for copra and coconut oil.

A Planting Manual entitled "The Oil Palm in Malaya" written by officers of the Department of Agriculture and embodying the most recent information on estate practice and on the results of field and factory investigations, was in the press at the close of the year.

Experimental work on manuring and selection continued during the year.

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—The estimated area of land planted with rice and the yield of padi to the nearest 1,000 gantangs for the season 1933-34 were as follows: (Formerly 686 gantangs of padi were taken to be equivalent to one ton of rice, but this conversion figure has now been revised to 700 gantangs of padi.)

	Wet.		Dry.		Total.	
	Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
Perak ...	90,570	28,142,000 ...	8,660	741,000 ...	99,230	28,883,000
Selangor ...	18,750	3,965,000 ...	2,660	220,000 ...	21,410	4,185,000
N. Sembilan	34,360	11,586,000 ...	670	69,000 ...	35,030	11,655,000
Pahang ...	37,710	7,562,000 ...	2,310	219,000 ...	40,020	7,781,000
Total ...	181,390	51,255,000 ...	14,300	1,249,000 ...	195,690	52,504,000

The area planted with wet padi decreased by 5.860 acres and that under dry padi by 12.610 acres. In spite of this, however, the total crop harvested was again a record, being equivalent to about 75,000 tons of rice, as compared with 72,625 tons which formed the record crop of the previous season.

This favourable result was entirely due to an increased yield per acre from wet padi which gave an average of 282 gantangs per acre as compared with 251 in the previous season. The factors responsible for this improvement were favourable weather, the more extended use of seed of high-yielding selected strains, better control of irrigation water and more systematic destruction of rats.

Large supplies of rice were available in the principal producing countries in the East, with the result that the prices of rice and of locally-grown padi were low. The latter varied in different districts from 4½ to 12 cents per gantang. The average price at the Government mill in Krian was $1.43 per picul as compared with $1.65 per picul in 1933. This low price for the staple food is an advantage to the great majority of the population; it is not a very serious handicap to the growers in a country where the crop is grown primarily to supply family requirements and where the majority of the growers also possess other sources of income, such as rubber or coconut holdings and fishing.

It is anticipated that the crop for the season 1934-35 will be smaller than that of the previous season. Weather conditions have been less favourable and the rise in the price of rubber, which has caused attention to revert to that crop, is believed to have caused a reduction in the area planted with padi, a swing of the pendulum that has been experienced in the past. Certain schemes for providing controlled drainage or irrigation to some 30,000 acres of additional padi land are nearing completion, or are in progress. About half this area has already been taken up and planted. Crops already obtained in parts of these areas have been satisfactory and should increase in future years as the land is brought more fully under cultivation.

A small self-contained padi mill to deal with the surplus crop in the Temerloh district of Pahang was erected by the Government of that State during the year.

Further selection and testing of pure strains of padi, cultivation and manurial experiments and work on padi soils have been continued during the year. In certain areas, more especially the important padi-growing district of Krian, a position has now been reached where two high-yielding strains can confidently be recommended for general cultivation over two large areas in each of which conditions are fairly uniform. Steps are being taken to encourage the exclusive use of these strains in their respective areas in order to provide the Government mill with large supplies of uniform grain and thereby to improve the quality of the rice produced, since mixed grain inevitably produces rice of poorer quality than uniform grain.

Tobacco.—The position of tobacco cultivation in Malaya has been described in previous reports. The crop is grown entirely to supply the local demand and is sold on the cheapest market. During the recent slump many persons could not afford imported cigarettes of even the cheapest brands and used locally-grown tobacco in preference to none. With the return of better times the consumption of imported tobacco, especially cigarettes, has, as indicated by imports, shown a marked increase during 1934.

In these circumstances there was naturally a smaller demand for the local product. Since the crop is of short duration and since much of it is grown in rotation with vegetables by Chinese market gardeners, the planted area can be rapidly adjusted to the demand. It is not surprising, therefore, that this area was only about 1,500 acres at the end of 1934 as compared with 2,000 acres at the end of 1933.

Prices varied widely in different localities and according to quality. For the greater part of the year, first quality sun-dried leaf in Perak, where an area of some 1,300 acres was grown, ranged from $30 to $45 per picul, while the top price in Selangor did not exceed $30 per picul.

A sudden rise in the price in Perak during December to $60 per picul for first quality leaf indicated that production, at least in that State, had fallen below demand. This was attributed in part to reduction in the planted area and in part to a poor harvest caused by unfavourable weather conditions at the close of the year and by the increasing ravages of the stem borer. This pest has become prevalent in Perak and measures for its control are under consideration.

Other pests and diseases of importance are leaf-eating caterpillars, slime disease and mosaic disease, the last of which has recently appeared in a few localities.

Experiments on the flue curing of Virginian tobacco to produce a yellow leaf for cigarettes have not yet proved entirely successful.

Fruit.—Both the half-yearly crops of tree fruits were in the Federated Malay States as a whole lighter than usual. Even in good seasons the supply is easily consumed locally. In consequence prices during 1934 were satisfactory to growers. Applications for planting material of good quality were numerous and considerably in excess of the supplies available at the Central Experiment Station, Serdang, and the local agricultural stations. Of other fruits the banana is the most important and occupied nearly 10,000 acres of land in the four States.

The local production of fruit is largely augmented by supplies of both tropical and temperate fruits from most of the countries bordering on the Pacific Ocean.

Vegetables.—The supply of vegetables to villages and towns is almost entirely in the hands of Chinese market gardeners, but is augmented by imports from the Netherlands Indies and elsewhere. One of the most important producing areas is the Kinta district of Perak from which exports by rail to the principal towns of the Peninsula amounted to 23,964 piculs as compared with 7,853 piculs in 1933. This marked increase provides a significant indication of the improved economic condition of the general population of Malaya.

General.—Agricultural instruction was vigorously maintained through the channels enumerated in last year's report. The rural lecture caravan toured all the States, being everywhere received in a manner which proves its value as a method of arousing interest in and disseminating information on various agricultural subjects.

A valuable innovation during the year was the All-Malayan Padi Competition conducted by the Malayan Agri-Horticultural Association with the aid of administrative and agricultural officers. In the first stage of this competition local padi shows were held throughout the country. In the second stage prize winning exhibits from these shows were judged at the association's exhibition in Kuala Lumpur and prizes were given for the best six exhibits. This competition provided an opportunity for useful instruction on the characteristics of good strains of padi.

The Malayan Agri-Horticultural Association held its eleventh exhibition in Kuala Lumpur in June and nine successful district shows were held in the States of Perak, Selangor and Pahang in addition to the local padi shows.

Vegetable gardens were upkept by the pupils at 400 vernacular schools in the four States of the Federation. As usual, group competitions were held for challenge cups and shields. The judging of these competitions revealed a steadily improving standard of layout and maintenance among most of the groups. Many of the pupils work small gardens on their parents' land. Competitions were also organised among groups of these home gardens.

The School of Agriculture, Malaya, attracted additional support. The number of students at the close of the school year in April was 53. Although 24 students then completed their training and left the school, the new session opened in May with 71 students who came from various parts of Borneo as well as of the Peninsula and included Malays, Chinese and Indians. Of the 24 students who left in April, 23 obtained appointments in Government service, in the Rubber Research Institute or in private employment.

The Department of Agriculture published its English, Malay and Chinese periodicals as usual and in addition issued eight special bulletins on scientific or general subjects and nine circulars in English on the cultivation of various crops.

LIVE STOCK.

The dairy farm at Fraser's Hill maintained the supply of milk, vegetables and eggs, but there were less visitors to the Hill than in the previous year which necessitated turning fresh milk into cream and selling surplus produce off the Hill at reduced prices. As a result the expenditure on the upkeep of the farm during the year was slightly in excess of the revenue obtained from sale of produce.

The establishment of the cross-bred Friesian/Montgomery herd at the Stock Farm, Serdang, was further developed and there were 53 head of cattle of different ages on the farm at the close of the year. A portion of the milk supply from this farm is sold to Government hospitals and private consumers through a distributing agent in Kuala Lumpur. Provision has been made for the erection of an additional cattle byre next year to accommodate young stock. The revenue obtained from the sale of produce on this farm was again well in excess of the expenditure, a highly satisfactory position for this experimental undertaking.

The reports of the Health Department on the quality of the milk from these farms show that bacteriologically it meets the standards laid down for "Certified" milk in England. Further, the milking herds have recently been thoroughly tested for tuberculosis and found to be free from this disease.

The section of the farm devoted to pig-breeding has also proved most successful and 39 head of stock were sold for breeding purposes during the year. The herd was further improved by the importation of one Middle White boar and one Large Black boar from Australia and one Middle White gilt from Hongkong.

The Chinese pig-breeders and market gardeners in Selangor have taken full advantage of the supply of pure-bred boars for the purpose of crossing with the native sows and it is estimated that as a result the number of cross-bred animals in the State of Selangor has increased from 4,000 at the end of 1933 to about 10,000 head during the year. Cross-bred pigs are also becoming well known to the numerous market gardeners in the Kinta district of Perak.

The services of a Poultry Instructor were retained throughout the year in the States of Selangor and Negri Sembilan. He continued to give talks on poultry management in the villages illustrated by models of suitable poultry houses and hygienic food containers. Sets of lecture notes illustrated by models and lantern slides were provided for use with the rural lecture caravan. By these means much useful instruction was given on the better housing and feeding of village poultry. More attention to these matters is badly needed in order to assist the birds to resist the epidemic diseases which cause serious losses each year.

Small flocks of pure-bred or cross-bred fowls have been established at several of the local agricultural stations in order to provide Malays and others interested in poultry keeping with a better type of bird. There is room for much improvement in the size of local eggs and in the size and growth rate of birds intended for table purposes.

Live stock surveys indicate that there have been increases in numbers of animals in the cases of all species in Perak, and similar small increases in Pahang. In Negri Sembilan there have been decreases in all species except pigs, while in Selangor the position is practically stationary except in the case of pigs in which there has been a marked increase in the numbers maintained for breeding purposes.

It is difficult to gauge the position in regard to poultry and it is doubtful that there is any great improvement in the types of birds reared by poultry keepers. Large numbers of live poultry continue to be imported.

It cannot be said that there has been any marked improvements in the breeding of cattle, buffaloes, and other animals. This is not anticipated until the problem is dealt with on lines suitable to the conditions obtaining in the districts. There has been evidence, however, that cattle owners wish to maintain and breed better animals, particularly cattle for dairying purposes.

The buffalo shows in the Raub district (Pahang) again proved successful and these shows now include exhibits of cattle, goats and poultry. In addition to the work already in progress on buffalo breeding, the veterinary farm at Raub has extended its operations to include observations on the breeding and feeding of poultry and of goats.

Importation of slaughter animals from outside tne Federated Malay States has increased, no doubt as the result of the general improvement in trade conditions. Importations of cattle and buffaloes from Siam via the East Coast Railway have increased during the year.

An outbreak of rinderpest at the Padang Besar Quarantine Station resulted in the closing of this station during November, and for the remainder of the year importation of cattle and buffaloes into the Federated Malay States via this station was prohibited.

Outbreaks of haemorrhagic septicaemia were responsible for small losses of buffaloes in Pahang and Negri Sembilan, but spread of the infection was soon controlled.

Rabies infection was confirmed in a dog at Taiping (Perak). A vigorous dog shooting policy was adopted by the Police Department in the area concerned, and thereafter no further case of rabies was reported at any place in the State.

A trypanosome infection caused mortality amongst horses at Pekan (Pahang) and movement of horses out of that State was prohibited.

Considerable attention has been given to research on poultry disease, and this has shown that the disease responsible for the greatest mortality in fowls is a highly infectious and fatal virus infection. The symptoms, course, and pathology of the disease have been established. Further research on the infection is in progress. Out of twenty-three outbreaks of disease amongst poultry in Perak, twenty-one were due to this virus infection.

Investigations on protozoal blood infections of cattle and nutritional problems were commenced, and were in progress at the end of the year.

The following table gives the live stock census during the year:

State.	Cattle.	Buffaloes.	Sheep and goats.	Pigs.	Dogs.	Horses.
Perak	25,040	15,061	42,391	48,638	14,025	236
Selangor... ...	10,582	2,581	22,271	100,191	8,260	127
N. Sembilan ...	7,730	12,232	22,460	33,847	3,864	18
Pahang	4,658	19,891	17,305	15,630	...	20
Total ...	48,010	49,765	104,427	198,306	26,149	401

The following return shows the imports into Malaya of meat and animal products, during the year:

Articles.	How counted.	Quantity.	Value in $.
Cattle	Nos.	45,568	1,941,596
Swine	,,	159,917	2,734,524
Sheep	,,	51,860	371,373
Goats	,,	7,206	88,463
Milk (condensed, etc.)	Cases	1,587,482	7,493,465
Butter	Cwts.	16,434	649,868
Ghee	Tons.	700	616,798
Lard	,,	551	135,378
Eggs, fresh and salted	Per hundred	371,855	563,065
Poultry—			
(*a*) Alive	Nos.	992,413	424,934
(*b*) Dead	Tons.	81	74,863
Meat—			
(*a*) Beef frozen, salted, etc.	,,	1,048	391,914
(*b*) Mutton and lamb, frozen	,,	445	224,465
Pig products—			
(*a*) Bacon and hams	,,	331	319,928
(*b*) Pork, fresh, frozen and salted	,,	99	69,934

FORESTS.

At a time when extensions of cultivation of so many economic crops are inhibited by the fear of overproduction, and it is becoming steadily clearer that vast areas of land in the tropics are likely to remain surplus to agricultural requirements for an indefinite time to come, it is appropriate to consider the uses to which such surplus land can be put, and the abuses from which it should be safeguarded. The Federated Malay States, with only 16 per cent. of their total area alienated and the remainder unoccupied and under forest, mostly primaeval and uninhabited save for a very sparse population of aboriginals, has a special interest in this problem, the solution of which lies in the maintenance of the conservative forest policy followed hitherto. The Malay Peninsula is fortunate in that its forests are not exposed to the same destructive influences, mainly arising from the practice of shifting cultivation, as in other regions of the moist tropics. The damage done by Sakai clearings is not, on the whole, of a serious order: though potentially valuable timber may be destroyed, the character of the vegetation is not, as a rule, radically altered, nor is soil fertility impaired.

While the problems of forest protection are relatively easy, those of forest utilization in the Federated Malay States are rather more formidable, mainly owing to the high cost of inland transport. Timber is a low-valued commodity, and there are limits to the transport costs it will bear; and this accounts for most of the difficulties experienced in extending markets for the forest products of the Federation outside its own boundaries, and for the inability to make fuller use of its large surplus resources of timber, which are mainly situated in the State of Pahang. Where cheap water transport is available, as for the output of the Telok Anson sawmills, which goes mainly to Penang, or for the trade in saw-logs for the Singapore mills from the east coast of Pahang, there is less impediment to the traffic in timber, and exports from the Federated Malay States, mainly by these channels, reached a value of $624,254 in 1934 as compared with $511,651 in 1933.

Timber both for domestic consumption and for export has in past years been derived largely from the exploitation of forest on State lands, but this source of supply is steadily contracting with the exhaustion, in the Western States, of the timber on such lands; and a problem of increasing urgency is the organization of the reserved forests to yield a continuous supply of timber. Conversion of the primaeval jungle into regularly managed crops of young timber could formerly be effected over relatively large areas, and with a minimum of expenditure on cultural work, by a technique relying on the sale "standing" of trees of unwanted species for conversion into firewood; but the competition of hydro-electric power and imported fuels has reduced the firewood trade to a shadow of its former volume. Much of the material to be eliminated is now unsalable, and recourse must be had to departmental operations for destroying the unwanted trees where they stand. A feature of the year was the development of a new system of tree poisoning which promises large reductions in the cost of such regenerative work.

Three new sawmills of a small type suitable for dealing with the output of raw material from forests under conservative working were erected in Perak during the year, the saw-benches in two of them being of Singapore manufacture, and sturdy and serviceable if not highly finished. The extension of sawmill facilities in the Western States, and particularly in Negri Sembilan, is an urgent need, as the unreliability of the hand-sawyer has long been an obstacle to the development of the timber industry in the Federation. Another urgent requirement is the adoption of more efficient methods of extracting logs in lieu of the traditional practice of dragging by single buffalo, and hopes were entertained towards the close of the year of the introduction into Western Pahang from Johore of the so-called *panglong* method of extraction by slideway and tramway.

The trade with the United Kingdom in Malayan timbers showed a moderate increase during the year, but the Federated Malay States, owing to the poor prices offering for high-grade export material, the usual transport difficulties and the counter-attractions of an active local demand, did not participate in the increase. There is however every reason to believe that the trade will be maintained by those Malayan producers who are favourably situated to engage in it, and that, as our timbers become better known in Europe, prices will rise to a level that will be attractive to sawmillers in the Federation.

The area of reserves at the close of the year was 7,363 square miles, and an additional area of 97 square miles was proposed for reservation.

The financial outlook brightened considerably with an increase of forest revenue by 26 per cent. from $626,343 to $792,040. Expenditure having been still further reduced from $761,239 to $676,950, last year's deficit of $134,896 was converted into a surplus of $115,090.

Outturn figures for 1934 and 1933 (in brackets), in thousands of solid cubic feet, were: timber 6,948 (5,103), firewood 9,230 (6,650) and charcoal 994 (802).

The extent to which depletion of State land resources has proceeded in each State may be inferred from the percentage of the total outturn of timber and fuel derived from forest reserves which was 71 (69) for Selangor, 58 (55) for Perak, 42 (33) for Negri Sembilan, and 10 (8) for Pahang. Owing to insufficiency of local supplies to meet the strong demand for timber in the Kinta Valley, timber prices rule higher in Perak than elsewhere in the Peninsula. Correction of this tendency will be dependent on the provision of funds for the silvicultural work required to put larger areas of the reserves into a condition in which they can be exploited without impairing their future productivity.

Revenue from minor forest produce continued to decline owing to a further large falling off in the output of *jelutong*: returns from superior *damar* and gutta percha on the other hand improved. Unfortunate as is the deterioration in the *jelutong* trade from the revenue standpoint, there is some comfort to be derived from the fact that the timber of this species appears to have good prospects in the export market.

No new engineering projects of importance were launched in 1934, the Forest Engineer having been absent on leave during the greater part of the year. Existing tramways and the ropeway installation functioned satisfactorily, and a system of "semi-metalling" forest roads proved successful in Perak South.

Experiments with pneumatic-tyred carts for conveyance of logs and firewood were instituted in the same division, with the co-operation of Messrs. The Dunlop Rubber Co. (S.S.) Ltd., but while such vehicles show distinct promise for forest work, the question of the most suitable body-designs for the two purposes indicated had not been satisfactorily solved at the close of the year.

The Timber Purchase Section bought less timber for the Railway Department owing to curtailment of the sleeper indent, purchases for that department amounting to $229,271 ($307,202), while business handled on behalf of other purchasers amounted to $55,803 ($18,246) and is expected to show a further large increase in 1935.

Research on forest products, botany, wood technology and silviculture was carried on at the Forest Research Institute, Kepong, and the testing and preservative treatment of timber continued to be the subject of investigations at the Timber Research Laboratory, Sentul. It is hoped shortly to apply the results of research on wood preservation in the creosoting on a commercial scale of strong but not naturally durable hardwoods such as *kempas*.

Federal and State duty posts held by officers of the Malayan forest cadre numbered 24 at the close of the year. The locally recruited English-speaking staff comprised three Extra Assistant Conservators and eight Sub-Assistants. The strength of the subordinate staff was 442, exclusive of 49 clerks, 25 boatmen, and 16 technical and clerical subordinates in the Timber Research Laboratory and Timber Purchase Section.

FISHERIES.

The fishing industry throughout the Federated Malay States has shown a distinct improvement, and fishermen are getting slightly better prices. The general improvement in trade is responsible for it.

Fishing was normal and the weather good. Exceptional conditions prevailed on the coast of Pahang owing to the mildness of the north-east monsoon, and the fishermen were able to go to sea to a much greater extent than usual during this season.

Revenue during 1934 from the fees paid by the fishermen for their boats and gear amounted to $26,424 against $25,555 in 1933.

The total number of fishermen employed amounted to 10,853 of whom 6,910 were Malays, 3,932 Chinese, 10 Indians and 1 of other nationality.

Most of the experiments on fish salting, canning and cultivation of fresh water fish were performed in Singapore.

Canning experiments have been continued, particularly with prawns which incidentally have proved to be difficult to handle. Samples are being tested for their keeping qualities and further work is proceeding.

Fresh water fish cultivation has been continued, and attention is being turned to the local carp which seem to promise well as substitutes for imported fish. They possess the advantage of being native to the country and in consequence always available. They breed in captivity and produce a large number of young.

The imported carp from China grow rapidly but do not breed, and supplies must be renewed yearly. The common carp from China will breed, but require a large area of still water with abundant water plants.

An examination of the Perak River below the Chenderoh Dam revealed abundant stocks of the normal river fish, and no shortage of fish was reported by the Malays living on the banks. The Chenderoh Dam does not appear to have had any adverse effect on the fish population.

Investigations were continued in the Cameron Highlands prior to placing an order for a supply of trout eggs for stocking the rivers there during 1935.

The fishery of Bukit Merah Reservoir is about normal again. Chenderoh continues to be good, and has become a vastly improved fishery, holding large stocks of valuable food fish.

MANUFACTURES.

There are but few manufacturing concerns in the Federated Malay States. They include four aerated water factories, one match factory, five distilleries, one plywood factory, two pineapple canning factories, one cement works, and a few tile and brick factories.

CHAPTER VII.

Commerce.

The aggregate declared value of the imports, exports and re-exports for the year 1934 amounts to $287,456,400, an increase of $108,441,315, or 60 per cent., compared with the year 1933.

While the declared value of the imports has risen, this satisfactory increase in the aggregate value is due mainly to the increase in the market prices of rubber and tin.

The price of tin varied from $110.62½ to $121 with an average of $114.43 per pikul in 1934 as against $99.81 per pikul in 1933.

The price of rubber varied from 13⅜ cents to 25⅜ cents with an average of 20.6 cents per lb. in 1934 as against 10.2 cents per lb. in 1933.

The price of copra (sun dried) varied from $2.55 to $3.30 and the average price for the year 1934 was $2.94 per pikul only, as against $3.89 per pikul in 1933.

The total value of the imports, exports and re-exports, including bullion and parcel post, for the last six years were as follows:

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1929	201,393,405	349,012,595	147,619,190
1930	168,020,418	213,652,044	45,631,626
1931	106,201,211	125,177,183	18,975,972
1932	71,133,301	87,851,281	16,717,980
1933	67,129,150	111,885,935	44,756,785
1934	84,731,059	202,725,341	117,994,282

and the favourable trade balance for 1934, resulting from the improvement in the prices of tin and rubber, which have increased the value of the exports by nearly ninety million dollars may be considered extremely satisfactory.

The increase in the purchasing power of the Federation is being reflected in the steady increase in the declared value of the imports into the Federation as shown by the quarterly figures given below:

MERCHANDISE, PARCEL POST, BULLION AND SPECIE.

	Imports.	Exports.	Re-exports.	Total.
	$	$	$	$
First quarter, 1934	18,272,948	39,699,316	957,283	58,929,547
Second ,, ,,	20,612,973	51,469,187	1,180,036	72,662,196
Third ,, ,,	21,992,250	49,752,996	940,515	72,685,761
Fourth ,, ,,	24,452,888	57,385,147	1,340,861	83,178,896
Total	84,731,059	198,306,646	4,418,695	287,456,400

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years is as follows:

Countries from which imported.	1932.	1933.	1934.
Singapore	34.12	32.78	31.42
Penang	19.16	18.24	17.61
Malacca	2.78	2.36	2.00
United Kingdom	12.06	12.68	12.70
Other British Possessions	8.53	9.43	9.36
Unfederated Malay States	2.74	2.73	2.28
Continent of Europe	3.09	2.39	2.54
Siam	7.92	9.09	9.45
Netherlands Indies	7.89	8.71	9.93
Other Foreign Countries	1.71	1.59	2.71
	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1932.	1933.	1934.
Singapore	26.50	25.94	23.12
Penang	32.19	27.06	28.08
Malacca	4.16	3.45	2.54
United Kingdom	9.26	9.96	16.62
Other British Possessions	1.14	.92	1.14
Unfederated Malay States	.75	.87	.60
United States of America	16.15	18.97	15.23
Other Foreign Countries	9.85	12.83	12.67
	100.00	100.00	100.00

Returns compiled under the triangular scheme for the co-ordination of information concerning rubber between Malaya, the Netherlands Indies and the Rubber Growers' Association, London, were supplemented to include information of interest under the International Rubber Regulation Agreement, in Malaya and in the Netherlands Indies, and were published regularly in the *Gazette*.

To co-operate with the Colony under the Importation of Textiles (Quotas) Ordinance, No. 23 of 1934, the Federated and Unfederated Malay States came into this scheme with effect from 7th May, and the necessary control was secured by means of prohibiting, by notification under their respective Customs Enactments, the importation otherwise than from the Colony or a Malay State of any class or classes of foreign textiles in respect of which a quota had been fixed by the Governor of the Colony, except under licence which, in the case of the Federated Malay States, was issued by the Registrar-General of Statistics, and in the case of the Unfederated Malay States, by a State Registrar acting in consultation with the Registrar-General.

The foreign (external) trade of Malaya, representing the Colony of the Straits Settlements, the Federated and the Unfederated Malay States, in merchandise, bullion and specie and parcel post amounted in value to $1,039 (£121) millions as compared with $767 (£89) millions in 1933, an increase of 35 per cent. Following upon the upward tendency of trade in 1933, the 1934 figures show that the trading position has been restored to a higher level than in 1931, when the corresponding total value was $897 millions.

The increase in the value of trade was chiefly due to exports and to the higher values obtained for rubber and smelted tin. The value of imports, however, also increased in respect of the same commodities as for exports, that is, for tin-ore and rubber, due to Singapore's entrêpot trade. There were also increased values for total imports in pepper and sticklac; as regards foodstuffs, in dried and salted fish and sweetened condensed milk; and as regards manufactured goods, in motor spirit, motor cars and cigarettes. The $1,039 millions consisted of imports $471 ($362) millions and exports $568 ($405) millions, the figures for 1933 being shown in brackets. The value of bunker coal, oil fuel and stores taken on board ships on foreign trade routes for their own consumption amounted to $11 ($11) millions and if this is added to the excess of exports there was a favourable trade balance of $108 millions as compared with a favourable balance, on the same basis, of $54 millions in 1933.

Of the $1,039 millions representing the trade of Malaya, $887 ($678) millions or 85 (88) per cent. indicate the direct foreign trade of the Straits Settlements, $126 ($75) millions or 12 (10) per cent. the direct foreign trade of the Federated Malay States, and $27 ($14) millions or 3 (2) per cent. that of the Unfederated Malay States.

For the Federated Malay States, the total trade amounted to $287 millions as compared with $179 millions for the previous year, an increase of $108 millions or 60 per cent. as shown in the Annual Report of the Customs Department. Of this total, $132 millions or 46 per cent. represented foreign trade, $152 millions or 52 per cent. trade with the Colony and $3 millions or 2 per cent. trade with the Unfederated Malay States.

CHAPTER VIII

Wages and Cost of Living.

The average weighted index of commodity prices, represented by 17 principal commodities (15 wholesale and 2 retail) increased by 40.5 per cent. as compared with 1933, due principally to increases in the prices of rubber, tin and pepper. There were increases also in the prices of damar and tea, while the prices of coconut oil, copra, palm-oil, rattans, rice and tapioca flake declined. There was an increase of 2.6 per cent. in the index of average retail food prices, and 3.9 per cent., 2.6 per cent. and 1.5 per cent. in the general cost of living for Asiatics, Eurasians and Europeans respectively. The rentals of residential houses in Kuala Lumpur did not change during the year.

The general cost of living index numbers for the Asiatic, Eurasian and European standards as compared with 1914 and 1933 were as follows:

Standard.	1914.	1933.	1934.	Percentage increase(+) or decrease(−) as compared with 1933.
Asiatic ...	100 ...	99.3 ...	103.2 ...	+3.9
Eurasian	100 ...	105.7 ...	108.5 ...	+2.6
European	100 ...	122.6 ...	124.4 ...	+1.5

The bulk of the labour in the Federated Malay States is employed on rubber estates and tin mines. The labour on the former is recruited mainly from Southern India while that on the latter is mainly Chinese.

In October, 1928, as the result of an enquiry in the coastal districts of Selangor, the following standard rates of wages were fixed for South Indian labourers employed in those districts:

An adult male labourer, 50 cents a day;

An adult female labourer, 40 cents a day.

The rates were based on a standard budget, including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. Standard rates for the inland districts of Pahang were fixed at 58 cents a day for each adult male and 46 cents a day for each adult female labourer. A subsequent enquiry, prompted by the fall in commodity prices and the inability of employers to pay these rates, was held in the middle of 1930 and the standard rates were then reduced to the following:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult male;
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult male;
37 ,, ,, ,, female.

Standard rates are the minima paid in Government departments.

The great improvement in the price of rubber during the year was rapidly reflected in an increased demand for labour and a consequent increase of wages and earnings. Whilst in January the minimum rates for a morning's work of 6 to 6½ hours were 28 cents for a man and 24 cents for a woman, in May it was possible to raise these rates to 35 cents and 28 cents, respectively, with sufficient afternoon work at proportionate rates to bring the earnings up to an average of 40 cents and 32 cents respectively. In the areas for which the higher standard rates had been prescribed, the corresponding rates similarly rose to 40 cents and 32 cents. Actual earnings were in many cases above these levels, particularly in Negri Sembilan.

Average commodity prices of the principal articles shown in the monthly trade returns increased by 40.5 per cent. as compared with 1933, due principally to the increase in the prices of rubber, pepper and tin. There were however scarcely any changes in the average total cost of the articles included in a typical South Indian labourer's budget. The average price in Singapore of Rangoon rice, which is the staple article of diet for estate labourers, actually decreased by 9.2 per cent., being 21 cents a gantang.

The introduction of a rubber regulation scheme allowed estates which had been closed to start work again and others where a portion of the cultivated areas had been "resting" resumed operations at full pressure both as regards output of rubber and also field and maintenance work. Throughout the year there was a steady demand for labour which necessitated the resumption of assisted emigration from South India. This was for the most part confined to non-recruited emigrants but the response again demonstrated the popularity of Malaya with South Indian workers who offered themselves in much greater numbers than it was considered advisable to accept.

The wages of Chinese labourers on rubber estates were usually higher than those for South Indians, varying from 40 to 65 cents a day. Of the labour engaged in mines some 20 per cent. is on contract, the balance being in receipt of wages.

CHAPTER IX.

Education.

(*a*) *General.*—The expenditure upon education (including $64,517* spent by the Public Works Department on the building and upkeep of schools) was $2,679,247. Of this sum, $412,288 was paid in grants to English aided schools, $53,167 in grants to Tamil vernacular schools and $78,564 in grants to Chinese vernacular schools. The total revenue amounted to $479,599 of which the sum of $263,902 represents the proceeds of the education rate, the remainder being derived from school fees and miscellaneous sources. The net expenditure on education was therefore $2,199,648.

Education facilities are provided in the Federated Malay States in English and in various vernacular languages—Malay, Chinese and Tamil.

Schools are either Government, aided by Government, or private.

All schools, i.e., places where ten or more persons are habitually taught in one or more classes (except where the teaching is of a purely religious character), and all supervisors, committees of management and teachers of schools must be registered in accordance with the Registration of Schools Enactment, 1934. In pursuance of the decentralisation policy of the Government the powers of the Chief Secretary have been handed over to the Resident in each State and those of the Federal Director and Assistant Directors of Education to State officers who are now called Superintendents and Assistant Superintendents of Education.

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* Excludes Public Works Department expenditure in Selangor.

(*b*) *English Education.*—The English schools are schools in which English is the medium of instruction. Few of the pupils are English speaking when they join, and the lowest class may be composed of children speaking between them some seven or eight different languages or dialects, those speaking one language or dialect being generally quite unable to understand those speaking any of the others. In the circumstances the use of the "direct method" of teaching English is practically obligatory. Children are accepted into the lowest class at the age of six or seven and they are given an education which ends as a rule with their presentation at the Cambridge School Certificate Examination, though one or two stay on and prepare for the London Matriculation Examination.

The fees are $30 (£3 10*s.*) a year for the first six years (i.e., for the years spent in the primary division of the school) and $48 (£5 12*s.*) a year for the remaining period. These rates remain in force for pupils enrolled prior to 1st January, 1934, but the rates for those enrolled on or after that date are $36 (£4 4*s.*) a year for tlie first eight years (i.e., up to and including Standard VI) and thereafter $72 (£8 8*s.*) or $108 (£12 12*s.*) a year depending on the results of an examination, 50 per cent. of the pupils for whom places are available paying the lower fee and the remainder paying the higher one.

Attendance is not compulsory.

In 1934 there were 23 Government English schools for boys, and 12 grant-in-aid English schools for boys and 13 for girls. The total average enrolments were 6,180, 5,208 and 4,420, respectively, a total decrease of 440 on the 1933 figures.

Of the 15,721 pupils in English schools at the end of the year, 13,125 were receiving elementary education (i.e., up to and including Standard VI) and 2,596 secondary education (i.e., above Standard VI).

Two thousand one hundred and sixty-eight (or 16.5 per cent.) of those receiving elementary education and 1,080 (or 41.6 per cent.) of those receiving secondary education were enjoying free education. The details of the nationalities so benefited were 277 Europeans and Eurasians, 1,822 Malays, 840 Chinese, 277 Indians and 32 others. On the whole 3,248 (or 20.7 per cent.) of the pupils were receiving free education.

The Malay College, Kuala Kangsar, trains probationers for the Malay Administrative Service and for various Government departments. At the end of the year there were 112 students, all boarders. The health of the boys was satisfactory during the year. The average strength of the Cadet Corps was three officers and 56 other ranks. The average strength of the Scouts was three officers, 42 scouts and 18 tenderfeet; the Acting Commissioner for Malaya inspected them in September and was satisfied with what he saw. The Troop took part in the rally on 24th November in honour of Lord Baden-Powell. Football, cricket and hockey are compulsory and tennis and fives were played regularly. The cost of running the College was $59,864, as against $61,703 in 1933. The fees collected from the Federated and Unfederated Malay States boys amounted to $8,060, as against $7,738 in 1933. The College is now taking the Cambridge Examinations in July instead of in December.

The aided English schools are managed by various missionary bodies—the Christian Brothers, the Methodist Episcopal Mission, the Church of England, the Plymouth Brethren and the Sisters of the Holy Infant Jesus.

The Government pays to such schools monthly grants equal to the difference between their revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment, and salaries in respect of European missionary teachers at the rate of $3,000 (£350) a year for men missionaries and $1,800 (£210) a year for women missionaries. Allowances at these rates, however, are payable only to a number of such teachers—not exceeding 16 per cent. of the total authorised staff of the school in boys' schools and not exceeding 25 per cent. in girls' schools. The other European missionary teachers are paid at the rate of $1,440 (£168) a year for men and $1,200 (£140) a year for women. In Christian Brothers' schools and Convent schools no distinction is made between European and Asiatic missionary teachers who are paid at a flat rate of $2,400 (£280) a year for men and $1,500 (£175) a year for women. Under certain conditions capital grants which may amount to half the cost of approved new buildings are also paid by the Government.

Owing to the financial position the Government restricted the payment of grant-in-aid for the period 1st January, 1934, to 30th June, 1934, to five-sixths of the sum paid in respect of the corresponding period in 1932 and for the period 1st July, 1934, to 31st December, 1934, to two-thirds of the sum actually paid in respect of the corresponding period in 1932. Government, however, excluded from this reduced grant-in-aid the liability for leave pay and passages in respect of one period of leave only after 1st January, 1934; i.e., such leave pay and passages were treated as additional to the reduced grant.

There is no central college for the training of teachers for English schools. Such training was until recently supplied at normal classes held at certain centres in all States except Pahang; in Pahang correspondence classes took their place. These classes have been suspended temporarily. Examinations have to be passed at the end of each year of a three-year course, those for the first and third years being conducted by a central authority and that for the second year by the local Inspector of Schools and the Instructors. Student teachers who pass the third year examination become "trained teachers".

At the beginning of 1934 there were only third year students in Perak and Pahang. At the third year examination held in March, 1934, twenty-five students passed (19 men and six women); these twenty-five students completed the three-year course and became "Trained Teachers".

At the end of the year four student scholars were in training in the third year of their course at Raffles College for work in classes in the secondary divisions of schools. Four student scholars completed their courses and obtained their diplomas in May.

Technical education.

(*c*) *Vocational and Industrial Education.*—The Government Technical School, Kuala Lumpur, provides courses of training for students from the Public Works, Railways, Electrical, and Posts and Telegraphs Departments, and gives accommodation also to a class conducted by the Survey Department for its own untrained subordinates. The number of students under instruction in May (the end of the Technical School year) was 86. Of this number 42 (i.e., about 49 per cent.) were of Malay nationality. Five private (fee-paying) students were admitted at the beginning of the new session in July bringing the number of private pupils under instruction to 11. At the end of the financial year there were 80 students, three of whom were undergoing a part-time course. During December, 11 students left to undergo a year's practical instruction and five finished their course. The hostel which accommodates 60 students was occupied by 40 in May and by 43 in December. It is apparent that interest in technical education is increasing. As an indication of the growth of local interest it is to be noted that no less than 78 entries were received for highly technical engineering subjects of the City and Guilds of London Institute Examinations in 1934.

It was decided during the year to transfer this school to the Selangor State Estimates as from January, 1935.

The evening classes held in Kuala Lumpur for apprentices at the Railway Workshops were handed over to the Railway Department in September and are now under its control. Science classes were held at the Victoria Institution for pupils of the Methodist Boys' School.

Industrial education.

There were 82 students drawn from all States of the Federation (36 from Selangor, 22 from Negri Sembilan, 8 from Perak and 16 from Pahang) in the Kuala Lumpur Trade School. Thirty-one students completed their course in June, of whom 27 are known to have obtained employment. The number of new admissions in July was increased to 40. To meet this increased enrolment, an extension of the building was made, and an additional fitting shop was built. A new hostel for the boys was provided on the first floor of Maxwell Road School. The gymnasium building there was used as a dining hall and a new kitchen was built. The course on workshop mechanics was revised to provide more nearly the elementary standard required to enable a mechanic to use his tools intelligently.

There were 74 students at the Trade School, Ipoh, 71 being Malays. Twenty-six completed the three years' course in June. Most of them succeeded in getting employment.

The average enrolment of the Trade School at Bagan Serai was 29. Carpentry classes are attached to 12 Malay schools in Perak; 34 students were examined by the Bagan Serai Instructor at the end of their three-year course and 30 passed. Training in carpentry appears to be a definite wage-earning asset. Boys who have passed out and have settled in their villages earn about $10 a month from carpentry as a spare time occupation. Some ex-students have opened a carpenter's shop in Bagan Serai. They work on a co-operative basis and the number of workers varies with the amount of work in hand. At times there are only two or three hands but sometimes there are as many as seven or eight.

The Trade School, Rembau, opened in 1930 to teach carpentry and wood-work, has now an enrolment of 12.

(*d*) *University and Collegiate* (*Post Secondary*) *Education.*—The highest educational institutions in Malaya are the King Edward VII College of Medicine, Singapore, and Raffles College, Singapore. The course of the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom. Licentiates of the College are thus able to secure admission to the Colonial List of the Medical Register and to be registered as medical practitioners in any part of the British Dominions.

Raffles College, Singapore, was opened in 1928 to place education of a University standard within the reach of all youths in British Malaya who were capable of profiting by it, and to meet an urgent need for qualified teachers for secondary classes. It provides three-year courses in arts and science. Diplomas are awarded to successful students.

The annual examination for the Queen's Scholarships was held in October. Eighteen candidates sat for this examination. There was no candidate for the Malay scholarship. The scholarship open to all races was awarded to Benedict Ponniah of St. John's Institution, Kuala Lumpur. He proposes to study law at Cambridge.

Malay vernacular schools.

(*c*) *Vernacular Education.*—Malay vernacular education is entirely free. School buildings (as a rule), quarters for staff, staff, equipment and books are all provided by the Government.

The aim in these schools is (i) to give a general and practical education to those boys who have no need for an education in English, and who will find employment either in agriculture or in appointments in which a knowledge of the vernacular is all that is required, and (ii) to provide a sound foundation in the vernacular on which an education in English can be superimposed for boys who desire to proceed eventually to an English school.

The school course normally lasts five years, during which period the pupils pass through five standards. The subjects of the curriculum are reading and writing (in the Arabic and romanised script), composition, arithmetic, geography, Malay history, hygiene, drawing and physical training. Boys do basketry and gardening in addition, and girls do needlework and domestic science.

In 1934 there were 451 schools for boys and 82 for girls with average enrolments of 37,957 and 4,882. The Malay teaching staff numbered 1,475. The Javanese School at the Selborne Plantations, Padang Tungku, Pahang, was closed in May as a consequence of a reduction in the labour force.

Those who are to become teachers in the Malay vernacular boys' schools are selected from the pupils who have shown promise. As pupil-teachers they both teach and study till they attain their sixteenth birthday and then soon after sit for an examination qualifying for admission to the Sultan Idris Training College, Tanjong Malim. If they do sufficiently well they are accepted into the College and put through a three-year course. Graduates of the College are designated "trained teachers".

At the end of the year there were 354 students at the Sultan Idris Training College. One hundred and eighteen students completed their three-year course. The total expenditure was $93,036 (as against $113,873 in 1933), towards which the Unfederated Malay States contributed $39.526 for their 74 students. The balance was defrayed by the Straits Settlements and the Federated Malay States Governments in the proportion of 1 to 2. The Translation Bureau housed in the College continued to publish school books and light modern literature in the Malay language: the cost of the bureau was $13,201.

In the Malay girls' schools all general subjects were taught, a shortened form of the syllabus in the boys' schools being attempted. In addition a full and detailed syllabus in needlework, as well as in some craft selected specially for each State, was followed. In the Perak schools domestic science was taught, one whole day a week being given up to instruction in laundry, housecraft and cookery. Drill and practical hygiene figured as subjects on every school time-table. In the absence of anything but the most spasmodic of training for Malay women teachers in such subjects as arithmetic, composition and geography, the curriculum for girls' schools was planned to include a larger amount of the industrial work that was obviously more within the scope of the mistresses.

The reconstruction of the Durian Daun Hospital buildings, Malacca, for the use of the Malay Women Teachers' Training Centre, was nearing completion at the end of the year. The Centre will commence work early in 1935 when selected Federated Malay States students will be sent there for training.

Chinese vernacular schools.

The two Government Chinese vernacular primary schools at Kuala Lumpur, namely, the Chinese Free School at Davidson Road and the Chinese Free School at Sentul, continued to function satisfactorily. At the end of the year the former had a staff of one headmaster and seven assistant teachers with an enrolment of 252 students, while the latter had one headmaster and two assistant teachers with 98 students. The Davidson Road School showed a decrease of seven students against last year's figure and the Sentul School showed a decrease of eight students. Both schools accommodate boys and girls and the education is free.

The number of Chinese schools receiving grants-in-aid in 1934 was 106 as in the previous year, Perak having 69 as against 68 in 1933, Selangor 31 as against 32 in 1933, Negri Sembilan 4 as in 1933 and Pahang 2 as in 1933.

The grants to Chinese vernacular schools are in two grades:

I	$10	per year per pupil
II	5	,, ,,

in average attendance. In order to qualify for Grade I, schools must teach English for a certain number of hours each day with reasonable efficiency and must employ for that purpose a teacher who holds the minimum qualification of a Junior Cambridge Certificate or a certificate recognised by the Director of Education as of equal value.

There are facilities for the primary vernacular education of Chinese boys and girls in all villages of any size. Fees ranging from 50 cents to $2 a month are charged but parents who are poor are exempted from payment. Public schools which afford reasonable prospect of permanence and which have already received grants-in-aid are still receiving such grants according to their standard of teaching under the new grades now in force.

There is no school in the Federated Malay States where only secondary education is given. There are, however, 16 Chinese schools (9 in Perak, 4 in Selangor, 2 in Negri Sembilan and 1 in Pahang) which have developed beyond the primary stage (a six-year course) and have secondary departments. The secondary course provided in fully developed "Middle Schools" in China lasts for six years, but in Malayan Chinese schools it is limited to three years, the first half of the full course. Fees are paid at the rate of about $3 to $4 a month. There were 622 boys attending these schools at the end of 1934.

Secondary vernacular education for Chinese girls was provided at two girls' schools and six mixed schools in Perak, at one girls' school and two mixed schools in Selangor, at two mixed schools in Negri Sembilan and at one mixed school in Pahang. There were 271 girls attending these schools at the end of 1934.

At the close of the year there were 363 registered schools and 1,048 registered teachers. The total enrolment was 25,744, of whom 6,892 were girls. Compared with the previous year there is an increase of 5 schools, 161 teachers, 2,377 boys and 1,097 girls.

Tamil vernacular schools.

At the end of the year there were 13 Government Tamil vernacular schools—eight in Perak, four in Selangor and one in Negri Sembilan. In addition there were 251 aided schools (as against 204 in 1933). Though co-education is not a policy, a number of girls attend these boys' schools. In Perak there were two schools exclusively for girls; they were run by Roman Catholic missionaries.

No fees are charged in estate schools but in some of the schools run by private bodies the pupils pay. There is usually an arrangement in such schools whereby poor children pay little or nothing. Government schools and private aided schools generally produce better work than the average estate school, but on estates where the labour force has been settled for years the standard of the work is as good as in town schools. Owing to lack of facilities and of trained teachers Tamil schools are generally behind Malay schools in such important subjects as drill, gardening and handwork.

Grants-in-aid are paid at the rate of $6 per pupil per year.

Recreation.

(*f*) *Recreation, Music, Art and Drama.*—Every encouragement was given to pupils to participate in school games. In almost all English boys' schools the maximum amount of games and organised sports, normally of the "team" variety, is provided. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket grows more and more popular. Football (association), hockey, volley ball, basket ball, tennis and badminton are played at most schools. Rugby football is played and gymnastics provided at some of the bigger schools.

In all English girls' schools, as in boys' schools, drill and games are now compulsory. Some girls' schools play basket-ball and have tennis and badminton courts.

Physical training reaches a good standard in Malay boys' schools, and association football, encouraged by inter-school competitions, is much indulged in.

Music.

Music is taught in all Convent schools and occasionally elsewhere. Singing is taught in the lower forms of all schools. Most schools have gramophones and a few have pianos. Cadet Corps and a few Scout Troops have their own bands.

Handwork and art.

Handwork is taught under the supervision of trained European mistresses in the primary and elementary departments. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, cardboard modelling, clay and plasticine modelling, stick-laying, bead-stringing, paper flower making, raffia-work and wool-work. All English girls' schools teach needlework; a very high standard is generally attained.

The attempt at establishing a recognised Craft School at the Sultan Idris Training College was continued, the three chief crafts practised being cotton-printing, batek-printing and pottery-work, with such minor crafts as lampshade-making and book-binding, painting and stencilling. Interest in the revival of Malay crafts and the acquirement of new ones has been awakened. During the year several Malay youths, both in the district and from outside, have enrolled for study at the Craft School.

Drama.

The drama forms part of the English curriculum of all English schools. The lower standards act simple plays and dramatic stories. The senior boys and girls perform scenes from Shakespeare.

CHAPTER X.

Communications and Transport.

Posts, Telegraphs, Telephones and Wireless.

Posts.

Postal facilities are provided in all the towns and larger villages in the Federated Malay States. There are now 98 post offices at which officers of the Posts and Telegraphs Department are employed and 68 places at which postal business is transacted by chandu clerks, station masters and others acting as postal agents. In the course of the year the post office at Labu (Negri Sembilan) was closed and a postal agency was opened there. The agencies at Sri Menanti (Negri Sembilan) and Kuala Sawah (Negri Sembilan) were closed.

The number of posting boxes, exclusive of those in post offices and postal agencies, was 309 on the 31st December.

During the year 145 licences for the sale of stamps and 220 licences for the collection of letters for transmission to China under the clubbed packet system were issued.

During the year a mail car service between Kajang and Semenyih was introduced, mails between these two places having previously been carried by a cycle postman. Also lower working costs resulted from calling for new tenders for motor mail contracts in Negri Sembilan.

The year 1934 was one of interesting developments in the air mail services of Malaya. From the 29th March the combined air mail fee and postage for correspondence addressed to Great Britain and British possessions served through Great Britain, which had hitherto been calculated separately, were combined, and flat rates were charged. As a result of special arrangements with the British Post Office very considerable reductions in the combined flat rates to Great Britain via Imperial Airways were made from the 15th November. The revised combined flat rates on correspondence addressed to places in Great Britain and Northern Ireland then became 25 cents per half ounce for letters and 15 cents per postcard. On the 19th December these reduced rates were extended to correspondence addressed to countries within the British Empire which are served through Great Britain.

With effect from the 17th December, a new air mail service with Australia due to leave Singapore each Monday and operating in connection with the England-Singapore service of Imperial Airways, was inaugurated. These mails are due to reach Darwin each Tuesday and the various capitals of the Australian States within another two or three days.

All air mail services operated on the whole with remarkable regularity.

Money orders.

All post offices and several postal agencies transact money order business and during the year 277,142 money orders to the value of $10,799,138 were issued and paid, representing an increase of 20,332 in number and $3,737,700 in value over 1933 figures. Telegraph money orders included in the main 1934 total amounted to 12,365 in number and $1,264,770 in value.

Savings bank.

At the close of the year there were 60,005 depositors in the Federated Malay States Government Savings Bank, with a total sum of $6,592,089 standing to their credit. Deposits made during the year amounted to $4,449,071 and withdrawals to $3,464,035. Interest credited to depositors amounted to $162,593. The increase in the number of depositors was 16 per cent. and the increase in the total amount in deposit was 21 per cent.

Telegraphs.

There are 101 postal telegraph offices in the Federated Malay States. During the year 193,636 telegrams were despatched and 212,019 were delivered, being an increase of approximately 9.5 per cent. in the number despatched and of approximately 5.7 per cent. in the number delivered as compared with 1933. The telegraph system worked satisfactorily throughout the year and there were no serious interruptions of communications.

The teleprinter apparatus introduced to replace morse working on the principal telegraph circuits worked satisfactorily throughout the year. The future departmental policy will be to extend the use of teleprinters and the telephoning of telegrams, thus eventually eliminating the morse system except for wireless traffic.

Railway telegraphs and allied services.

The Federated Malay States Railways' telegraphs, telephones, block and tablet signalling systems, and other miscellaneous apparatus were maintained satisfactorily throughout the year in accordance with the Federated Malay States Railway Agreement No. 1502 of 1933. The more important work carried out in the Federated Malay States during the year consisted of the introduction of intermediate tablet working between Padang Jawa, Connaught Bridge junction and Klang during March. Ordinary tablet signalling on the Port Dickson-Seremban branch line was discontinued during December and the instruments and signalling wires were recovered. Towards the latter part of the year approximately 215 miles of spare overhead wires were recovered and the abandonment of an obsolete and faulty cable between the railway telephone exchange, Kuala Lumpur and Batu Junction, resulted in a reduction of 130 miles of wire.

Telephones.

The number of direct exchange lines connected to the Federated Malay States telephone system as at 31st December, 1934, was 4,040, an increase of 270 as compared with the number at the end of 1933.

The total number of telephone instruments was 6,223 and of other miscellaneous circuits 526.

The revenue derived from telephones was $1,013,068, an increase of $83,165 over 1933. Of this revenue $397,217 was derived from trunk and junction services, an increase of $86,391 over the previous year.

Seventy-three public telephone exchanges were in operation in the Federated Malay States at the end of the year, one new rural semi-automatic exchange having been opened at Triang.

The manual exchanges at Sungei Besi and Ampang were converted to automatic working. The latter exchange was provided with an automatic unit, specially designed and constructed in the Posts and Telegraphs Department, which enables subscribers to dial direct to numbers on the Kuala Lumpur exchange in addition to Ampang numbers. The semi-automatic exchange at Puchong was also converted to full automatic working.

Extensions of equipment were carried out at Cameron Highlands (automatic), Taiping and Pekan (manual).

Rearrangements and extensions of trunk channels were carried out during the year, permitting a full range of trunk communication between all exchanges on the Malayan Trunk System, which comprises all exchanges in Straits Settlements, Federated Malay States, Johore and Kedah with the exception of Pekan (in Pahang) and a few minor exchanges in Kedah, where local circumstances do not permit of long distance working. The "Personal Call" service was also extended during the year to embrace all exchanges in the Malayan Trunk System.

Radio telephone services with Bandoeng (Java) and Manila (Philippine Islands), whereby all exchanges in the Malayan Trunk System may communicate with all exchanges in Java and the majority of the exchanges in the Philippine Islands, were commenced during the year.

eless

Kuala Lumpur.—The Petaling Hill transmitting station and the Kenny Road receiving station worked satisfactorily throughout the year, the wireless services performed being:

Petaling Hill—(Selangor).

(*a*) Regular telegraph services with Kuantan and Sungei Lembing in Pahang and Grik in Upper Perak.

(*b*) The meteorological bulletins broadcast from Hong Kong and Bangkok were received daily by Petaling Hill Station and supplied to the Meteorological Branch of the Survey Department.

(*c*) Aircraft wireless services were maintained with "Imperial Airways", "K.L.M. Air Service", "Royal Air Force Flights", "the Melbourne Air Race", and other miscellaneous flights.

(*d*) Emergency wireless telegraph services with Singapore and Penang, and with Kuala Lipis and Temerloh in Pahang, and with Kuala Krai and Kemubu in Kelantan.

(*e*) Regular telephone service with Kuantan in Pahang.

(*f*) Successful telephony tests have been made with Bangkok, and also with Medan direct, and with Macassar through Bandoeng. (Tests with Bombay were unsuccessful owing to the inadequate power of the Kuala Lumpur transmitter).

(*g*) Broadcasting on behalf of the Malayan Amateur Radio Society was carried out three times weekly throughout the year.

Traffic.—The total number of messages dealt with by the regular telegraph service between the Kuala Lumpur station and the stations at Grik and in Pahang was 38,478. This compares with 34,435 in 1933, an increase of approximately 11.7 per cent.

Broadcast Receiving Licences.—Seven hundred and sixty-nine licences for the use of wireless receiving apparatus were issued during the year as compared with 473 in 1933 representing an increase of approximately 62.6 per cent. on the 1933 figures.

Broadcast Dealers' Licences.—There were 48 licences in force on the 31st December, 1934.

Individual Sale Licences.—Under the amended Wireless Telegraphy Regulations made under the Telegraphs Enactment, 1933, and published as *Federated Malay States Government Gazette* Notification No. 5333 of the 2nd November, 1934, listeners desiring to sell their wireless sets are required to be licensed to make the sale. There were six individual sale licences issued from 2nd November, 1934, to 31st December, 1934.

Financial. The nett revenue collected by the Posts and Telegraphs Department in 1934 was $2,274,508, an increase of $272,486 compared with 1933. Annually recurrent expenditure amounted to $1,923,095 against $1,991,768 in the previous year, a decrease of $68,673. Special expenditure in 1934 amounted to $122,095. These revenue and expenditure figures do not include the value of services rendered free of charge by or to the Posts and Telegraphs Department.

RAILWAYS.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles) extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying the railway and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the west and the east coast lines.

The west coast line runs north-north-west through Negri Sembilan, Malacca, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang Harbour about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of Padang Besar 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on the 1st July, 1918, the distance between Singapore and Bangkok being 1,195 miles.

The east coast line proceeds northwards from Gemas through Negri Sembilan, Pahang and Kelantan terminating at the port of Tumpat. The length of the line is 328 miles and provides an alternative route to Siam from Singapore. A branch line 11¾ miles long from Pasir Mas in Kelantan to the Golok River at the Siamese boundary connects with the Siamese line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on 1st November, 1921, and via the east coast line on 6th September, 1931.

Branch lines connect the main line with the ports of Malacca, Port Dickson, Port Swettenham, Teluk Anson wharf and Port Weld all on the west coast.

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak; and Kuang-Batang Berjuntai, 14 miles; Kuala Lumpur-Batu Caves, eight miles; Sungei Besi-Sultan Street, eight miles; and Sultan Street-Ampang, six miles, all in Selangor.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,068 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are provided with restaurant or buffet parlour cars and sleeping saloons.

There are 214 permanent stations and 72 flag stations.

Financial.

The expenditure on Capital Account amounted to $235,288,207 on 31st December, 1934, of which $49,735,103 was met from Loan Funds, $183,520,303 from Revenue Advances and $2,032,801 from Railway Revenue.

The receipts in 1934 from all sources were $11,284,147, an increase of 24.87 per cent. compared with 1933. Expenditure chargeable to Revenue Account excluding Renewals Fund contribution amounted to $9,709,390, a decrease of 12.34 per cent.

The receipts from all sources were $1,574,757 more than the total expenditure on all services and this sum has been transferred as part contribution to the Railway Renewals Fund.

Capital expenditur

During the year, expenditure on Capital Account was $17,540 compared with $186,546 in 1933. A reduction of $144,684 has been made in the Capital Account representing the value of retired assets.

Renewals Fund.

The nett expenditure from the Railway Renewals Fund during the year amounted to $435,883 compared with $489,631 in 1933. The balance standing to the credit of the Fund at 31st December, 1934, was $7,478,164, the corresponding figure at 31st December, 1933, being $6,339,290.

Passenger train traffi

The receipts from passenger train traffic amounted to $3,958,677 compared with $3,121,302 in 1933, an increase of $837,375 (26.83 per cent.)

Goods trai traffic.

The receipts from goods train traffic amounted to $5,256,109 compared with $3,988,231 in 1933, an increase of $1,267,878 (31.79 per cent.).

Road moto transport service.

The receipts from road motor collection and delivery services amounted to $144,219 compared with $109,989 in 1933, an increase of $34,230 (31.12 per cent.).

Miscellaneous services (docks, ferries, rents, etc.). Miscellaneous services produced receipts to the amount of $1,925,142 during the year compared with $1,817,254 in the previous year, an increase of $107,888 (5.94 per cent.).

Railway Board. The Railway Board, composed of four official and seven unofficial members, held three meetings during the year.

ROADS.

Roads have been upkept as efficiently as available funds permitted, but, in view of the continued increase in the volume of traffic, their condition is still a source of anxiety to engineers responsible for maintenance.

A study of maintenance figures shows that Class III roads cost as much in maintenance as those of Class II, and that the upkeep of timber bridges is a definite drain on the maintenance vote. Replacement of bridges of this type, of which there are still a large number, would be a measure of economy to be pursued when conditions allow.

The amount collected in tolls from the Iskandar and Blanja Bridges in Perak was $56,018, representing an increase of 27 per cent. on the 1933 figure. It is interesting to note that hired cars were responsible for the highest percentage increase.

In Pahang during 1934 there was a storm of abnormal severity which caused considerable damage to the Ginting Simpah Road between miles 83 and 88. The road was closed for four days owing to fallen trees, debris, slips, washouts of bank, etc. A special provision of $18,000 was granted to repair the damage and the work was completed by 1st May, 1934.

The experimental stretches of rubber roadways laid down in Kuala Lumpur have, on the whole, worn well, but it has been necessary, here and there, to refix the edges with bitumen.

The total mileage of metalled and gravelled road upkept from the maintenance vote was 2,707 including 1,821 miles or 67 per cent. of roads bituminously treated.

The average cost per mile of road upkept was $555 compared with $512 per mile in 1933 and $577 and $1,070 in 1932 and 1931 respectively.

The total expenditure on maintenance of metalled roads was $1,501,733 as compared with $1,467,750 and $1,654,753 in the two preceding years.

In addition to metalled roads 181 miles of unmetalled roads and 1,507 miles of bridle-paths were maintained.

SHIPPING.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during the last three years were as follows:

	Number of vessels.	Tons.
1932	2,596 ...	5,925,736
1933	2,666 ...	5,863,698
1934	2,873 ...	6,378,361

The number and tonnage of ocean-going steamers entered and cleared at this port were as follows:

	Number of vessels.	Tons.
1932	1,314 ...	5,250,130
1933	1,690 ...	5,358,614
1934	1,869 ...	5,882,621

The number of ocean-going steamers which came alongside the wharf was 307 against 256 in 1933. The largest vessel entering the port was s.s. "Philoctetes" (British) of 11,446 tons. The deepest draft vessel entering the port was s.s. "Menelaus" (British) drawing 31′ of water.

The following table shows the nationality, number and tonnage of ocean-going merchant vessels entered and cleared at Port Swettenham during 1934:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American ...	12	44,340 ...	12	44,340 ...	24	88,680
British ...	658	2,239,493 ...	655	2,233,986 ...	1.313	4,473,479
Danish ...	43	158,725 ...	43	158,725 ...	86	317,450
Dutch ...	81	158,975 ...	81	158,975 ...	162	317,950
German ...	39	175,760 ...	39	175,760 ...	78	351.520
Japanese ...	20	84,633 ...	20	84,633 ...	40	169,266
Norwegian ...	70	73,004 ...	70	73,004 ...	140	146,008
Siamese ...	13	9,134 ...	13	9,134 ...	26	18,268
	936	2,944,064 ...	933	2,938.557 ...	1,869	5,882.621

A reduction of 10 per cent. on all pilotage fees was still in effect.

AIR SERVICES.

There is an excellent landing ground at Taiping, Perak, completed in November, 1931. It is about two miles from the town, is roughly 1,000 yards square and is suitable for all aircraft in all weathers. Eighty-seven aeroplanes made use of the ground during the year. In Kuala Kangsar district, investigations have been proceeding with a view to providing an emergency landing ground 1,000 yards by 300 yards at Simpang Ampat, and this work is now in hand. In Ipoh, a site for an "L" shaped landing ground has been selected adjacent to the left bank of the Pinji River about two miles south-east of Ipoh. The landing ground at Port Swettenham is incomplete and is still in the experimental stage. It is not yet fit for use by aircraft. In Kuala Lumpur there is a landing ground which is used also by the local Flying Club. It is at present being improved by sub-soil drainage—a temporary ground being in use during operations. The Kuantan River is suitable for the alighting of seaplanes, and flying boats from Singapore have already on occasions alighted there.

CHAPTER XI.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—6 branches.

Hong Kong and Shanghai Banking Corporation—2 branches.

The Mercantile Bank of India Limited—4 branches.

There are no agricultural or co-operative banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under Enactment 16 of 1921 the standard weights and measures are:

(i) The Imperial standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns ... ... =1 chi
10 chi ... ... =1 tahil ($1\frac{1}{3}$ oz.)
16 tahils ... ... =1 kati
100 katies ... ... =1 pikul ($133\frac{1}{3}$ lbs.)
40 pikuls ... ... =1 koyan

CHAPTER XII.

Public Works.

The total expenditure of the department was $3,989,169 out of an authorised provision of $4,643,919.

Reductions on the provision and savings effected during the year were as follows:

(*a*) Annually Recurrent	$165,410
(*b*) Other Charges and Special Expenditure	10,770
(*c*) Special Services:	
Loan and Revenue Accounts	478,570
	$654,750

The value of work carried out by the Public Works Department for other departments amounted to $93,131, bringing the total expenditure for the year to $4,082,300.

The expenditure of $3,989,169 was made up as follows:

(*a*) Annually Recurrent	$3,501,433
(*b*) Other Charges and Special Expenditure	56,373
(*c*) Special Services:	
Loan and Revenue Accounts	431,363
	$3,989,169

The corresponding figures for 1933 were:

Annually Recurrent	$4,088,634
Other Charges and Special Expenditure ...	4,720
Special Services	796,098
	$4,889,452

being a decrease of $900,283.

The comparative percentages of expenditure to authorised provision in 1934, 1933 and 1932 were as follows:

	1934.	1933.	1932.
(*a*) Annually Recurrent ...	95.52	93.13	87.89
(*b*) Other Charges and Special Expenditure	83.96	84.03	48.73
(*c*) Special Services	47.30	88.05	84.50

Under major works plans and specifications were completed for two blocks of single men's barracks for the Malay Regiment at Port Dickson and a contract was let.

Plans and specifications were also prepared for the following additional buildings: Field Officer's quarters, Captains' and Subalterns' quarters (two), quarters for Malay Officers (four), Assistant Surgeon and Junior Malay Officers' quarters, Guard House and Reception Station.

Buildings were maintained in a reasonable state of repair but arrears of maintenance are being accumulated and many buildings are overdue for painting.

The percentage of upkeep cost to estimated value of buildings was 0.863 against 0.834 in 1933.

Water works were maintained in good condition throughout the year and many small economies and improvements were effected.

In Perak work was continued on the new District Water Supply, Telok Anson, on which a sum of $51,517 was spent. The new sedimentation tank and the extension to the filter house were completed and the new 15" rising main from the engine house to the service reservoir was put into commission. One set of new Harland pumps were brought into operation and work on a second set commenced. At Kampar, the analyses of the water were unsatisfactory and it was decided to try out the chlorine ammonia treatment. Very satisfactory results were obtained. The initiative for employing this treatment lay entirely with the Public Works Department and it is believed that the Kampar supply is the first in the Federated Malay States in which this treatment has been successful. A considerable amount of investigation has been carried out in respect of proposed water supplies to kampong areas in the State.

The Taiping landing ground was upkept throughout the year at a cost of $2,645, an additional sum of $1,067 being spent at the request of the Royal Air Force on minor improvements to drainage.

In Selangor a considerable amount of investigation work was carried out during the year with a view to finding a satisfactory site for a full size aerodrome. Three complete schemes were prepared and estimates taken out. A scheme was also prepared for re-conditioning the present aerodrome in use by the Kuala Lumpur Flying Club to enable it to be made use of by heavy aircraft and the work of sub-soiling the area and regrading the surface, etc., was put in hand at the close of the year.

DRAINAGE AND IRRIGATION.

The collection and collation of hydrological data was continued by the Department of Drainage and Irrigation. Rainfall statistics were collected from 411 stations and the monthly and yearly averages were deduced for all stations. Systematic gaugings of the discharges were recorded of the following rivers:

> Ijok, Pari, Kinta, Perak, Batang Padang in Perak, Bernam River at Tanjong Malim, Selangor, Klang, Langat, Semenyih in Selangor, the Linggi River in Negri Sembilan, and the Bentong River in Pahang.

Three hundred and ninety-three current meter observations were taken.

Surveys and investigations were made for a silt control scheme on the Serendah River above Serendah Town in order to permit tin mining, and complete set of working drawings for bunds and spillways was prepared.

The Tanjong Karang area of unexplored swamp between the Tengi and Bernam Rivers was investigated and contoured. A detailed survey of 110 square miles of swamp was made, comprising a strip along the Tengi River averaging seven miles deep and extending from the foot-hills to the coast path. Surface levels and borings to determine clay levels were taken. The foot-hills area stretching from the Bernam River to the head waters of the Tengi River was found to be overlaid with 20 feet of peat.

The whole of the area surveyed was water-logged and buried under peat and dead vegetation and the indications are that the interior of the Tanjong Karang swamp is unsuitable for padi cultivation.

The coastal strip to a depth of four miles is capable of development and there is a possibility of irrigating 15,000 acres from the Tengi River.

The peat swamp in its primeval condition stores an enormous quantity of water and investigations are necessary to determine whether this storage can be utilised for the irrigation of the coastal area.

Maintenance of the Krian irrigation works has been satisfactorily carried out during the year at a cost of $59,710 and embraced the upkeep of:

the irrigation reservoir and headworks;
48.55 miles of main canal;
252.46 miles of distributaries;
261.05 miles of drains;
283 water-gates;
103 syphons; and
68.3 miles of bunds.

The balance sheet is satisfactory as compared with previous years, the excess of revenue over expenditure being $28,154 as compared with $26,413 in 1933 and $19,598 in 1932. Under Capital Expenditure there were additions amounting to $141,441 in respect of the extension scheme and the installation of syphons and pipe-gates.

The Bagan Datoh drainage area was maintained in good working order at a cost of $38,364 which represents 83 cents per acre of alienated land or 79 cents per acre on the whole area. Approximately $17,500 was spent on maintenance of drains including desilting, $12,300 on the coast bund and $5,300 on water-gates. 27.5 miles of drains were desilted at a cost of $308 per mile.

Although construction work on the first stage of the Sungei Manik irrigation area was not quite completed it was decided to irrigate in all areas where a water command was available. Approximately 1,550 acres of land were planted with padi and a further 900 acres were in course of planting at the end of the year. The new irrigation works, where tested, were efficient and satisfactory. A large area of jungle (approximately 1,727 acres) was felled by incoming cultivators during the year. The question of colonization of the area has received careful consideration and in regard to progress, 4,000 acres have been surveyed, 1,000 acres are awaiting survey, and 3,170 acres have been alienated. One thousand nine hundred and forty-seven acres of padi were planted this year in a cleared area of 2,500 acres.

Owing to a somewhat serious increase in the incidence of malaria at Batu Gajah which was traced to swamp breeding anopheline mosquitoes, funds were provided in April, 1934, for the reclamation of swamp areas bordering the town. The methods of reclamation adopted were three-fold: namely, sliming from small streams by discharging slimes from nearby tin mines into the streams and depositing on the areas; filling certain areas adjacent to the Kinta River by pumping sand from the river on to the area by suction dredgers and regrading the channel by use of the dipper dredger to improve drainage. These methods besides providing for reclamation of the swamp area have also the advantage of improving the river channel and protecting the town from flooding. At the end of the year it was estimated that roughly 8,000 cubic yards of slimes had been deposited on the area, 61,500 cubic yards of sand pumped from the river and 10,250 cubic yards of material (mainly clay) dug from the flood channel and used in making up the bunds.

The amount spent during the year on the dredging of the Larut River was $34,141 and the total cost of the work amounted to $55,676 against an estimate of $58,000. The total estimated yardage of materials removed from the river course amounted to 190,038 cubic yards and the cost per cubic yard was 23 cents exclusive of $12,435 spent in transporting the dredger to and from the site. This work should effect a lasting improvement to the river and riparian area but periodic maintenance dredging will be necessary. The agricultural lands which will benefit from this work have been declared a drainage area and it is proposed to impose a drainage rate to recover a portion of the capital cost and provide for maintenance.

The first pumping scheme of the riverine areas in Perak, comprising Bota and Lambor Kanan, was nearing completion at the end of the year, the only outstanding item being the completion of installation of the pumping set. It was formerly anticipated that the scheme would have been in operation before the close of the year but late delivery of the plant followed by very wet weather caused considerable delay.

Funds for the commencement of construction of the Krian irrigation extension scheme were made available in May, 1934, and a start was made in June. The cost of the scheme is spread over a three-year programme and the total estimated cost is $375,000 which will be borne in equal shares by the Colonial Government and Perak. The amount provided for 1934 was $128,000 of which $122,651 was spent. The work carried out during the year under the various headings was as follows:

(*a*) Increasing capacity of main canal ...	$82,516
(*b*) Extension to Sungei Acheh area in Province Wellesley	7,452
(*c*) Extension to Kurau forest reserve area	30,153

For the work under (*a*) two dragline excavators were purchased through the Crown Agents and put to work towards the end of the year. The scheme provides for increased supply of irrigation water by diversion of the waters of the Sungei Ijok to Bukit Merah reservoir, extension of irrigation to 4,550 acres of existing padi lands in Province Wellesley; extension of irrigation to a new coastal area embracing approximately 3,000 acres; extension of irrigation to a new area of approximately 750 acres near Bukit Merah and general improvement in supply to the whole of the area comprised in the existing schemes. The area covered by the existing works amounts to approximately 50,000 acres and with the extensions now in hand this will be increased to 60,000 acres.

Sungei Manik Irrigation Scheme (Second Stage).—A contract was let for jungle clearing on the line of the river bund reserve on the right bank of Sungei Batang Padang and work commenced in June. Work is being kept, as far as possible, at an economical distance ahead of the bund construction contract.

A contract was let for the construction of a bund on the right bank of Sungei Batang Padang between the Kampar-Degong road bridge and the railway bridge (a total length of approximately 480 chains). This contract involves 144,500 cubic yards of earthwork and is being done by means of a "Priestman" dragline excavator. Work commenced at the end of August and by the end of the year the machine had placed spoil for approximately 170 chains of bund.

Controlled Drainage Scheme, Panchang Bedena Padi Area.—Satisfactory progress has been made in this, the third year of construction. The construction of the main drain which had been proceeding from both ends was completed on the 25th September when the two headings met and water control and access in the area was much improved. All the control gates were completed by the end of the year.

It was found possible to maintain in employment, through petty contracts, from 250 to 300 local men principally on drains and bund construction and this should be a useful source of ready money in the area and assist the settlers in opening up their lands.

The expenditure for the year was $79,012 against a provision of $100,000, making a total expenditure on the scheme to date of $230,451.

There has been constructed in all four main water control gates and 20 subsidiary gates, 12½ miles of main drain and bund, 35¼ miles of subsidiary drain and bund and 1¾ miles of outer bund or a total length of bunds that would stretch from Kuala Lumpur to Tanjong Malim.

Drainage and Bunding of the Sabak Bernam Peninsula.—The bund to the west of Sungei Tengar is being constructed by hand and by the end of the year only some 20 chains out of a total length of 348 chains remained uncompleted. This work was done by Malay labour at a uniform rate of 35 cents per cubic yard except in cases where a longer lead increased the cost. The Malay labour worked very satisfactorily in dry weather but progress was very slow in the wet months.

A contract was let in February for the construction of the bund to the east of Sungei Tengar by means of a "Priestman" dragline mechanical excavator. The length of bund included in this contract is 15 miles and the yardage involved is 305,700, the contract cost per cubic yard being 26 cents. Work commenced in May and by the end of the year the machine had placed spoil for 385 chains of bund.

The approved expenditure for the completed scheme is $180,000 and the expenditure to the end of the year is as follows:

Total expenditure in 1933	... ...	$ 6,783
,, ,, 1934	... ...	75,903
	Total ...	$82,686

Four water gates were constructed at Sungei Tengar, Parit Bahru, Bagan Nakhoda Omar and Sungei Banting.

Training of the Selangor River at Kuala Kubu.—The object of the scheme is to train the river to a defined channel along the right flank of the valley so as to stabilise the deposits of silt washed into the valley as the result of uncontrolled hill mining in the past and to permit of dredging the reclaimed flats for tin and also the old township of Kuala Kubu. Work was started in February when contracts were let for the concrete and masonry spillway between the Rest-house hill and the right bank, and for the excavation of the cut for part of the channel behind the old site of the District Officer's quarters. The spillway was completed satisfactorily in September.

Sungei Buloh Irrigation Scheme.—The construction of the *tali ayers* for this scheme was completed during the first six months of the year, the greatest difficulty being experienced in getting the local Malays to work satisfactorily. It is disappointing to record that no advantage was taken of the irrigation facilities provided during this padi season. The scheme originally provided for the construction of the headworks and the two main *tali ayers*. In order to assist the cultivators, a plan was prepared for the layout of the distributaries for 200 acres near the 18th mile village. When this area is settled, the remainder of the irrigated area will be dealt with in a similar manner. In order to improve the drainage of the lower portion of the scheme the Sungei Buloh was cleared and snagged from the Elmina Estate access road up through the scheme.

Ulu Gombak Irrigation Scheme.—The scheme provides a permanent dam and intake and improvements to the *tali ayers* of the Gombak valley sawahs. The concrete dam was completed satisfactorily in October and the *tali ayers* and syphons before the close of the year. These works should greatly improve facilities for padi cultivation as the brushwood dams previously in use were unreliable in the swiftly flowing stream and it is hoped full use will be made by the cultivators of the increased water supply now available.

Small irrigation schemes were completed in Negri Sembilan at Gadong and Mampong. A contract for the construction of a dam, intake, channels and syphons to irrigate 564 acres at Labu was let near the close of the year. Plans were in preparation throughout the year for a controlled water supply in the Menyala Valley near Port Dickson—an area of 505 acres at present in jungle.

Construction work on the Sungei Blat (Kuantan) irrigation scheme was continued throughout the year. The total area within the bunds constructed to date is 1,171 acres and the cost per acre works out at $17.50 for a purely controlled drainage scheme. Twenty-eight acres of reserves half a chain wide were cleared along the drains and bund. A total of 624 chains of bunds and drains were completed this year and maintained. Seven control gates were constructed.

At Padang Kangsar, Pulau Tawar, Lipis district, a scheme for irrigation by inundation was drawn up early in the year and the contract for the construction of a dam 28 feet high, control works and a spillway was let in June. Progress on this was very slow at the start, later inclement weather was encountered and further delays ensued.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment, 1918, and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;
(*b*) Courts of a Magistrate of the First Class;
(*c*) Courts of a Magistrate of the Second Class;
(*d*) Courts of a Kathi and Courts of an Assistant Kathi;
(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record and generally, in original jurisdiction, has the same jurisdiction and authority as is exercised in England by the Chancery and King's Bench Divisions of the High Court of Justice. The establishment consists of a Chief Justice and three Judges, but the Chief Justice and Judges of the Supreme Court of the Colony and the Judge of the Supreme Court of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The Chief Justice and Judges are appointed by the High Commissioner, who may also appoint any fit and proper person to act temporarily as Chief Justice or as a Judge, and may terminate any such appointment.

Magistrates are appointed by the Resident by name or office. Appointments have always been made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally, every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a Penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a Penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment, 1928, for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code, 1923, in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang the Police Contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner, who, subject to the general direction of the Commissioner of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his Contingent. A fifth Contingent exists in the Depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner, who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is also in Kuala Lumpur the Headquarters staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch, which co-ordinates criminal and political information in the Federated Malay States, and the Criminal Registry or Finger-print Bureau, which serves not only the Federated Malay States but also the Straits Settlements and the Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hong Kong, Netherlands Indies, Siam and Indo-China.

The Federated Malay States Police cadre provides for 16 British officers for service on deputation in Unfederated Malay States and the Federated Malay States Railway Police.

The total approved strength of the Police Force is 3,934 comprised as follows:

103	British officers;
55	Malay and other Asiatic officers;
2,301	Malay rank and file;
1,251	Northern Indian subordinate police officers and constables;
224	Detectives (of various nationalities).

In addition there is a Veterinary Police Force of 68 Malays and Indians which, for disciplinary purposes and reasons of economy, is housed in police barracks and is paid from police votes, though under the direction of the Veterinary Department.

There were no important modifications of the approved establishment in 1934.

During the year 239 Malays were enrolled, 195 were natives of the Federated Malay States and 44 of Malacca and Penang; there was no shortage of applicants. Recruiting of Northern Indians was resumed for the first time since December, 1931, and 83 were enrolled; the physical standard of recruits of both nationalities was up to the average.

Lack of unemployment and cheapness of rice, the staple food of the Chinese, combined with the higher prices of tin and rubber provided conditions favourable to a decrease in crime. The figures for 1934 were satisfactory.

Offences of all kinds reported at police stations during the year totalled 97,920 compared with 98,677 in 1933. Of this total, 6,600 were reports of seizable offences, a figure which compares with 9,065 the previous year. At the close of the year 2,121 convictions had been recorded in respect of seizable offences.

Under the category of serious crime the offences of murder, gang-robbery and robbery are classified together. In 1934 offences under these headings totalled 77, a figure lower than any recorded in the past 30 years. The number of murders dropped from 69 to 35, gang-robberies from 16 to 5, and robberies from 68 to 37. There were two murders committed in the course of gang-robbery or robbery. There was no organised gang of robbers operating in the Federated Malay States during the year. There was no case of abduction nor of counterfeiting notes or coins.

The reports of house-breaking showed a gratifying decrease and totalled 1,071 compared with 1,606 the previous year whilst thefts decreased from 4,601 in 1933 to 3,311.

The continued drop in serious crime and the decrease in seizable offences generally enabled payment of more attention than ordinarily possible to non-seizable offences with the result that they totalled 91,320 compared with 89,612 in 1933. The police prosecuted in 69,207 of these cases. There was no public gaming on a large scale during the year. The lotteries organised by the several Turf Clubs were made the subject of various abuses.

Thirty-two firearms were recovered by the police during the year 1934. Of these, 12 were identified as having been lost or stolen. Of the remaining 20, two were home-made guns and seven were home-made pistols.

The suppression of brothels and of trading in women is undertaken by the police. In all there were 50 prosecutions instituted in pursuance of this duty.

The issue and renewal of passports was performed by the police. Five hundred and forty-two new passports were issued during the year, 409 were renewed, 319 endorsements were made and 171 visas granted.

During the year inquiry by means of finger-print slips was made at the Criminal Registry regarding 22,444 persons charged with offences, and identity was established in 4,582 instances.

For the first time in the 30 years since the inauguration of the Registry the number of deletions exceeded the number of new records filed. There were 8,475 new records filed whilst 15,485 were deleted owing to death or because they had become valueless in consequence of the efflux of time. Since the start of the Registry in 1904 a total of 286,525 records have been filed of which 56,860 have been deleted leaving 229,665.

There were 265 persons banished from the Federated Malay States during the year.

PRISONS.

Description.—Of the six prisons in the Federated Malay States, the one at Taiping is primarily a convict prison. The others at Batu Gajah, Kuala Lumpur, Seremban, Kuala Lipis and Kuantan are local prisons.

Prisoners are also detained for short periods in lock-up cells at certain police stations.

Vagrants are confined to special vagrant wards.

Population.—The total daily average population of all the prisons which, in 1933, was 1,540.52 decreased to 1,119.46 in 1934.

At the beginning of 1934 there were 1,364 prisoners remaining and 5,370 were admitted during the year. On the 31st December, 1934, there were 935 prisoners remaining in all the prisons after 5,779 discharges, 11 deaths and nine executions.

Health.—The health of the prisoners was good.

Juvenile Offenders.—Juvenile offenders are sent to the Reformatory at Singapore as there is no special institution for their reception in the Federated Malay States. This Reformatory is administered by the Education Department.

There is no probation system.

CHAPTER XIV.

Legislation.

Forty-three Enactments were passed during the year 1934, of which the following were the most important :

No. 5, The Notaries Public Enactment. Formerly section 138 of the four State Negotiable Instruments Enactments of 1898 (Pahang 1899) dealt with notaries public, but on the repeal of these four State Enactments by the Bills of Exchange Enactment, 1934, the opportunity was taken of passing a separate Enactment dealing with notaries public. The Enactment provides for the appointment of local notaries by the Legal Adviser, the recognition as of right to English notaries, and the rights of notaries appointed under the four repealed State Enactments are preserved.

No. 6, The Bills of Exchange Enactment repeals the four State Negotiable Instruments Enactments of 1898 (Pahang 1899). The repealed law followed the Indian Negotiable Instruments Act, 1881, but the present Enactment follows the English law as contained in the Bills of Exchange Act, 1882, which is in force in the Colony.

No. 11, The Courts (Amendment) Enactment makes the Chief Justice, Straits Settlements, an ex-officio Judge of the Federated Malay States and provides for his precedence as such. Both the Chief Justice, Federated Malay States, and the Chief Justice, Straits Settlements are now in similar positions and sit as members of the Court of Appeal in both territories. The provision that a person could only be appointed a Judge provided he had been a barrister of England or Ireland, or a member of the Faculty of Advocates in Scotland, or an advocate and solicitor of the Supreme Court of the Federated Malay States or the Colony, has been repealed.

No. 17, The Rubber Regulation Enactment imposes a system of control on the production and exportation of rubber by limiting the export to such amounts as may be authorised by the Controller of Rubber and by fixing the maximum amount of rubber stocks that may be held. Fresh planting is prohibited and the Controller has power to order any fresh plants to be eradicated and destroyed at the cost of the owner. Replanting is prohibited, except under the most stringent conditions, and the export of rubber plants, trees and seeds is made illegal.

No. 28, The Air Navigation (Amendment) Enactment brings local legislation into conformity with the Order in Council entitled "The Air Navigation Amendment Order, 1932", and fulfils the requirements of the International Air Navigation Convention.

CHAPTER XV.

Public Finance and Taxation.

Budget for 1934.

The Estimates of Revenue and Expenditure for the year 1934 provided for a revenue of $47,422,507 (excluding Railway Revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway expenditure on Revenue Account) of $50,367,483.

Actual revenue and expenditure.

The actual revenue for the year was $58,926,323, while expenditure came to $47,211,228. There was thus a surplus of $11,715,095 against an estimated deficit of $2,944,976.

Revenue analysed.

The excesses in revenue as compared with the estimate were:

	Excess.
Customs	$ 6,137,430
Excise	2,233,887
Forests	139,902
Lands and Mines	265,356
Licences and Internal Revenue ...	759,882
Fees of Court or Office, etc.	504,947
Municipal	200,103
Light, Water, Power, etc.	441,227
Posts, Telegraphs and Telephones ...	74,508
Timber and Minor Forest Products ...	86,359
Rents on Government Property ...	53,257
Interest	229,829
Miscellaneous	246,172
Land Sales	129,483
Sale of Property	960
Colonial Development Fund	514
Total ...	$11,503,816

The excesses and shortages in Customs, Excise, Lands and Mines, Licences and Internal Revenue, Municipal and Light, Power, Water, etc., revenue as compared with the estimate were:

	Excesses.		Shortages.
(*a*) Customs—			
Export Duty on Tin	$1,389,125		
,, Rubber	1,590,490		
Import Duty on Tobacco	922,579		
,, Spirits	352,489		
,, Petroleum	500,411		
,, Kerosene	88,066		
,, Sugar	—	...	$210,442
,, Edible Oils and Fats	—	...	22,560
,, Textiles and Apparel	647,182		
,, Rice and Padi ...	71,211		
Other items	808,879		
Total ...	$6,370,432	...	$233,002
Nett excess ... $6,137,430			

(*b*) Excise—	
Sale of Chandu	$1,905,836
Other items	328,051
Total excess ...	$2,233,887
(*c*) Lands and Mines—	
Land Rents (Recurrent)	$221,147
Other items	44,209
Total excess ...	$265,356
(*d*) Licences and Internal Revenue—	
Traction Engines and Motor Cars ...	$118,068
Other items	641,814
Total excess ...	$759,882
(*e*) Municipal—	
General Assessment	$ 37,465
Other items	162,638
Total excess ...	$200,103
(*f*) Light, Power, Water, etc.—	
Light and Power	$322,607
Water	109,189
Slipway	9,431
Total excess ...	$441,227

The excess under Fees of Courts, etc., is accounted for by the following large items:

(*a*) Recoveries of Overpayments in Previous Years	$66,586
(*b*) Rebates on Passages	45,932
(*c*) Recovery of Joint Expenditure	43,405

(*d*) Sundry Sales	$39,266
(*e*) Pension Contribution	14,140
(*f*) Cinema Censorship	15,628
(*g*) Registration of Companies	11,489
(*h*) Customs Handling and Overtime Charges	21,192
(*i*) Miscellaneous	53,009
(*j*) Reimbursement for Survey Work	12,322
(*k*) Refund of Immigration Expenses	10,016

The excess under Interest is accounted for by increase in investments and in Daily Bank Balances.

The excess under Miscellaneous Receipts is accounted for principally by the transfer of an excess in the 4½ per cent. Straits Settlements Sterling Loan—Composition Stamp Duty Fund over and above the original allotment less payments to date.

Expenditure analysed. The savings and excesses in expenditure as compared with the estimate were:

Head of Expenditure.	Savings.	Excesses.
Reserved Services—		
Charges on account of Public Debt ...	$ 35	
Pensions, Retired Allowances, etc. ...	1,589,127	
The High Commissioner	5,801	
The Rulers and Chiefs	5,419	
The Chief Secretary	5,571	
The Residents	5,544	
Civil Service	25,494	
Audit	8,079	
Courts	7,583	
District and Land Offices	76,935	
Exchange	10,000	
Game Warden	— ...	$ 1,685
Geological	116	
Government Gardens and Plantations ...	— ...	6,358
Indian Interpreters	1,551	
Labour	34,917	
Legal Adviser	1,688	
Marine	5,411	
Miscellaneous Services	— ...	1,437,534
Municipal	212,125	
Museums	2,511	
Office of Registrar of Titles	123	
Police (State Services)	1,281	
Posts and Telegraphs	106,946	
Printing	47,105	
Purchase of Land	7,854	
Railways	797,460	
Town Planning	2,721	
Customs and Excise	107,843	
Treasury	9,781	
W. & O. P. and P.O.G. Fund	3,174	
Colonial Development Fund	— ...	514
Total ...	$3,082,195 ...	$1,446,091

Nett savings ... $1,636,104

Head of Expenditure.	Savings.	Excesses.
Unreserved Services—		
Agricultural	$ 50,936	
Chinese	12,159	
Clerical Service	13,411	
Co-operative Societies	5,885	
Drainage and Irrigation Department	16,601	
Drainage and Irrigation Works, Annually Recurrent	24,063	
Drainage and Irrigation Works, Special Services	—	$266,342
Education	182,737	
Electrical	—	8,962
Estate Duty Office	76	
Fisheries	412	
Forests	65,995	
Malayan Establishment Office	450,489	
Malay Officers	68,402	
Medical and Health	397,450	
Military	—	125,748
Mines	26,708	
Miscellaneous Services	—	35,187
Official Assignee and Registrar of Companies	—	831
Police	177,856	
Prisons	88,948	
Public Trustee	216	
Public Works Department	73,923	
,, Annually Recurrent	91,574	
,, Special Services	128,445	
Surveys	138,708	
Transport	—	67,468
Veterinary	9,696	
Total	$2,024,690	$504,538

Nett savings ... $1,520,152.

Excess.

A.—Reserved Services—

(*a*) Miscellaneous Services $1,437,534 is due to unprovided special expenditure, large items being:

(i) Contribution and working expenses, Fraser's Hill	$ 46,057
(ii) Refund of leave salaries and passages to other administrations	42,462
(iii) Refund of Revenue (Estate Duty collected in excess)	36,800
(iv) Loss on Factory Trading for the year 1933	28,533
(v) Deficiency—Investment Adjustment Account	1,240,816

(*b*) Game Warden $1,685—Special provision for Chief Game Warden.

(*c*) Government Gardens and Plantations $6,358—Special provision for the Superintendent, Hill Gardens, Taiping.

(*d*) Colonial Development $514. This is balanced by a corresponding increase under Revenue.

B.—Unreserved Services—

(*a*) Drainage and Irrigation, Special Services, $266,342. Special expenditure on development of rice cultivation with a corresponding saving against the provision of $500,000 under Miscellaneous Services.

(*b*) Miscellaneous Services $35,187. This excess is caused about by the special provision of $537,922 for leave salaries of officers who proceeded on leave prior to 1st January, 1934, less $500,000 lapsed on account of development of rice cultivation.

(*c*) Transport $67,468. Special provision with corresponding savings on Malayan Establishment Office to meet the passage expenses of officers who proceeded on leave prior to 1st January, 1934.

(*d*) Electrical $8,962. Special expenditure on account of improved activities.

(*e*) Official Assignee and Registrar of Companies $831—is caused by the special provision of $1,200 to meet the allowance to the Collector of Estate Duty for performing the duties of Official Assignee and Registrar of Companies.

(*f*) Military $125,748. This excess is caused about by the acceptance of certain maintenance, etc., charges of the Headquarters Company of 10/20th Burma Rifles in the Training Battalion for period 1st January, 1930, to 31st December, 1934, in 1934 accounts.

Public debt.

The total amount of the public debt on 31st December, 1934, was $96,185,714, being:

Straits Settlements Sterling Loan	$80,185,714
Federated Malay States Local Loan ...	16,000,000

The Straits Settlements loan remained as on 31st December, 1933, at $80,185,714 (£9,355,000). The first instalment of this loan (£5,155,000) was issued in December, 1921, at 97, bearing interest at 6 per cent. and the second instalment (£4,200,000) in May, 1922, at 95, with interest at 4½ per cent. The Sinking Funds contributions, which started in 1925, amount to $24,950,269.

The Federated Malay States local loan of $16,000,000 was issued in May, 1931, at 98, bearing interest at 4½ per cent. The Sinking Fund contributions for the redemption of this loan was started in January, 1934, and amount to $177,337.

The following statement shows the assets and liabilities on the 31st December, 1934:

Assets and liabilities

LIABILITIES.		$	c.
Capital Account (Straits Settlements Sterling Loan), Balance at credit thereof (*a*)		491,126	21
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959), Balance at credit thereof (*c*)		5,009,678	54
Capital Account (3 per cent. Sterling Loan, 1960 70) 5 per cent. on application		980,494	79
Sundry Outstanding Accounts		22,306	21
Due to other Governments—			
India, Agency Account ...	$121,639.99		
India, Current Account ...	260,165.43		
Ceylon, Agency Account ...	55,081.93		
		436,887	35
Family Remittances		948	38
S.S. Government War Service Land Grant Scheme		7,900	83
Deposits—			
Courts	$200,637.72		
Forests	182,945.01		
Lands	296,018.26		
Postal	185,016.31		
Postal Account, Stores—Colony	300,000.00		
Planters' Loan Board	600,000.00		
Miscellaneous ...	758,941.27		
		2,523,558	57
Selangor River Protection Reserve Account		87,528	54
Sundry Funds—			
Police Fine and Reward Fund...	$ 47,401.04		
Public Officers' Guarantee Fund	399,732.60		
Composition Stamp Duty Fund	198,249.64		
R.E.R. & P. Reserve Fund ...	2,181,407.46		
Phillips' Agricultural Scholarship Fund ...	5,640.66		
Malayan Flood Relief Fund ...	50,613.99		
Rubber Fund ...	628,897.99		
Miscellaneous ...	37,461.52		
		3,549,404	90
Opium Revenue Replacement Reserve Fund		28,070,429	93
Surplus		49,526,824	09
		90,707,088	37

ASSETS.		$	c.
Cash—			
In Treasuries and Banks	$7,416,931.33		
,, Agencies	168,192.91		
,, Transit	314,656.32		
Fixed Deposits	27,719.10		
Joint Colonial Fund (Crown Agents)	10,379,999.96		
		18,307,499	62
Suspense—General		29,187	65
Suspense—Stores and Materials—			
Post Office	$ 838,917.80		
P.W.D....	181,386.60		
Electrical	673,865.01		
Forest Engineer	2,367.77		
Marine Slipway	16,910.31		
Burma Rifles	111,163.50		
Minor Forest Produce, etc.	9,385.80		
		1,833,996	79
Investments, Surplus Funds—			
Sterling Securities (at valuation)	$5,933,972.89		
Local Securities (at valuation) ...	11,193.00		
		5,945,165	89
Investments, Opium Revenue Replacement Reserve Fund—			
Sterling Securities (at valuation)	$20,784,715.64		
Loan to Perak River Hydro-Electric Power Coy. Ltd. ...	7,285,714.29		
		28,070,429	93
Investments, Specific Funds—			
Police Fine and Reward Fund ...	$ 41,813.21		
Public Officers' Guarantee Fund	377,478.36		
Malayan Flood Relief Fund ...	49,396.00		
Phillips' Agricultural Scholarship Fund	5,483.00		
Composition Stamp Duty Fund ...	198,249.64		
		672,420	21
Advances—			
Due by other Governments ...	$ 58,140.99		
,, Railways	267,220.34		
Buffer Pool Tin Scheme	2,424,194.66		
Bentong Tailings Retention Scheme	231,519.06		
Central Health Board	118,290.85		
Others	68,857.36		
		3,168,223	26
Imprests		94,248	08
Loans—			
Siamese Government (*b*) ...	$27,607,302.65		
Brunei ,, ...	378,200.00		
Kelantan ,, ...	300,000.00		
Planters	1,898,196.52		
War Service Land Grant Scheme	1,278,224.01		
Agricultural	18,027.84		
Buildings	186,607.50		
Miscellaneous...	919,358.42		
		32,585,916	94
		90,707,088	37

NOTE:

(*a*) The Straits Settlements Sterling Loan, the first two instalments of which totalling £9,355,000 ($80,185,714.29) have been fully subscribed, appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of the issue of the loan and expenditure on works authorised to be carried out from loan funds appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of Revenue.

(*b*) Repayment of the loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

(*c*) The 4½ per cent. Local Loan, 1959, has been fully subscribed and appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of the issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are to be provided out of Revenue.

Railways.

The result on the year's working disclosed a surplus of $1,574,757 which was credited to the Renewals Fund, so that the revenue and expenditure balanced.

Loan to Siam.

The loan to the Siamese Government of £4,630,000 ($39,685,714), which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $27,607,303 on the 31st December, 1934, having been reduced by the payment of the eleventh instalment due on 1st January, 1934.

Loan to Brunei.

The loan to Brunei, which stood at $383,000 on 31st December, 1933, has been reduced to $378,200 by the payment of annual instalment due in 1934.

Loan to Kelantan.

The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1934.

Loans—Planters' and War Service, etc.

The total amount of Planters' and War Service loans outstanding on 31st December, 1934, was $3,176,421 against $3,784,556 on 31st December, 1933.

Other loans.

Miscellaneous loans outstanding on 31st December, 1934, amounted to $1,123,994 compared with $1,171,021 on 31st December, 1933.

Buffer Pool Tin Scheme.

Advances made on this account to the end of the year amounted to $2,424,195.

The Federated Malay States contribution to the Buffer Stock was approximately 3,587 tons and the total sums advanced came to $2.5 millions. The advances carry interest at 4½ per cent. per annum and are repayable at option.

Surplus.

The surplus on 31st December, 1933, was $37,811,729. As the revenue for the year exceeded the expenditure by $11,715,095, the surplus was increased to $49,526,824 on 31st December, 1934.

The liquid assets comprising cash and realisable investments (excluding the investments earmarked for certain specific funds) amounted to $24,252,665 at the end of the year as compared with $11,090,187 at the beginning.

The holdings in Perak River Hydro-Electric Power Co., Ltd., and in Sungei Draka Plantations have been written down to $1 in each case.

Opium Revenue Replacement Reserve Fund.

This fund was started with $10 millions provided out of revenue in 1925; with $9,828,503, representing contribution at 15 per cent. of the annual revenue from chandu sales for the years 1926 to 1930, and with the accumulated interest from inception to 31st December, 1930, stood at valuation on 31st December, 1933, at $27,164,907. It has been increased to $28,070,430 on valuation of securities at current middle market rates on 31st December, 1934. The fund is invested in sterling securities with the exception of one item, a loan of £850,000 to the Perak River Hydro-Electric Power Co., Ltd.

The interest earned on this fund during 1931 to 1934 was credited to revenue and contribution to the fund during these years was suspended.

Rubber Fund.

This fund, which was started on 1st June, 1934, on introduction of rubber regulation, amounted to $628,898 after payment of the regulation and other incidental expenses connected therewith.

Rubber Experimental, Research and Propaganda Fund.

This fund which was created by an allocation of $2½ millions in 1930 and stood at $2,298,493 on 31st December, 1933, was reduced to $2,181,407 on 31st December, 1934. The commitments against this balance amounted to $944,286 on 31st December, 1934.

Straits Settlements Sterling Loan Capital Account.

A statement of the Sterling Loan Capital Account is published as Appendix B to this report. Of the total proceeds of the two instalments amounting to $74,297,549, expenditure on the railway and other works up to 31st December, 1934, accounted for $73,806,423, leaving a balance of $491,126 still available to meet capital expenditure.

Federated Malay States Local Loan Capital Account.

A statement of the Local Loan Capital Account is published as Appendix C to this report. Of the total proceeds of $15,640,000, expenditure on railway, electrical and public works accounted for $10,630,321, leaving a balance of $5,009,679 still available to meet capital expenditure in 1935 and subsequent years.

Three per cent. Federated Malay States Sterling Loan.

This is a conversion of the 4½ per cent. Straits Settlements Sterling Loan which was effected in December, 1934, and the total of application money received to 31st December, 1934, amounted to $980,495 as shown on the liabilities side of the balance sheet.

The following is a summary of the Customs tariff:

IMPORT DUTIES.

Description of article.	Full duty.	Preferential duty.
Ale, beer, stout, porter, cider and perry	$1.30 per gallon	$1.20 per gallon
Other intoxicating liquors	Graduated from $1.50 to $14 per gallon or proof gallon	90 cents to $10.50 per gallon or proof gallon
Tobacco	Graduated from 70 cents to $1.60 per pound	$1 per pound for cigarettes and manufactured tobacco if imported for sale to the public in airtight tins or containers
Petrol	35 cents per gallon	
Kerosene	15 „ „	
Sugar, gula kachang, jaggery, molasses, treacle, golden syrup, sugar candy and sugar cane	5 cents per pound	3 cents per pound
Syrups and solutions containing more than 30 per cent. of sugar	50 cents per gallon	30 cents per gallon
Cartridges	$11 per 1,000	$10 per 1,000
Matches	Graduated from 12 cents per 100 containers and upwards	
Edible oils and fats	Graduated from 4 cents to 20 cents per pound	Graduated from 2 cents to 15 cents per pound
Cement	$12 per ton	$6 per ton
Cement manufactures other than tiles	$2 per ton	—
Tiles—roofing, flooring and wall	$12 per ton	$10 per ton. Tiles—flooring and wall
Cosmetics and perfumery	50 per cent. *ad valorem*	25 per cent. *ad valorem*
Textiles and wearing apparel	20 per cent. or 5 cents per yard whichever is higher	10 per cent. or 2½ cents per yard whichever is higher
Boots, bootees, shoes, overshoes, slippers and sandals of all descriptions made wholly or partly of rubber, balata or gutta percha	50 cents per pair	10 cents per pair

Description of article.	Full duty.	Preferential duty.
Rubber soles	25 cents per pair ...	5 cents per pair
Tanned hides and skins, leather and imitation leather, leather and imitation leather manufactures other than fancy goods	15 per cent. *ad valorem*	5 per cent. *ad valorem*
Cycles and accessories—		
Cycles—complete ...	$4.50 each	$1.50 each
Saddles	30 cents each	10 cents each
Frames—complete ...	$3 each	$1 each
Frames—parts of ...	15 cents per piece ...	5 cents per piece
Handle bars—with fittings and otherwise	30 cents each	10 cents each
Rims	30 ,, ,, ...	10 ,, ,,
Chains	30 ,, ,, ...	10 ,, ,,
Cycle tyres (outer covers)	15 cents per cover ...	8 cents per cover
Cycle inner tubes ...	6 cents per tube ...	3 cents per tube
Motor and motor-cycle tyres (outer covers)	20 per cent. *ad valorem*	Free
Motor and motor-cycle inner tubes	20 ,, ,, ...	Free
Pianos	10 ,, ,, ...	—
Other musical instruments, wireless receiving and transmitting sets and parts thereof including gramophones, electrical gramophones or reproducers, phonographs, records, needles, valves and other parts or accessories	20 per cent. *ad valorem*	10 per cent. *ad valorem*
Coffee—		
Raw	3 cents per pound ...	—
Prepared	8 ,, ,, ...	—
Extract or essence, whether mixed with other substances or not	5 per cent. *ad valorem*	—
Ground-nuts	1½ cents per pound ...	¾ cent per pound
Milk (including cream), condensed, desiccated or preserved	$5 per 100 pounds nett weight	$1 per 100 pounds nett weight
Fruits, jams, marmalade, vegetables, fish, meats and soups in metal, glass or earthenware containers	20 per cent. *ad valorem*	5 per cent. *ad valorem*
Printing paper	10 ,, ,, ...	Free

Description of article.	Full duty.	Preferential duty.
Manufactured brass, bronze and copperware	15 per cent. *ad valorem*	5 per cent.
Batteries and parts thereof for electric torches or handlamps ...	20 ,, ,, ...	5 ,,
All other electric batteries and parts thereof	15 ,, ,, ...	Free
Paraffin wax and articles made thereof	15 ,, ,, ...	5 per cent.
Fish maws and sharks' fins	15 ,, ,, ...	5 ,,
Umbrellas and lamp shades covered with silk, artificial silk or cotton	10 ,, ,, ...	5 ,,
Tea	8 cents per pound ...	6 cents per pound
Saccharine	$5 per pound	—
Fireworks and crackers	10 cents per pound ...	—
Oil cloth and linoleum ...	10 per cent. *ad valorem*	—
Straw, grass, rush and mengkuang (pandan) manufactures	10 ,, ,,	—
Rice and padi—all varieties	15 cents per pikul	—

EXPORT DUTIES.

Description of article.	Duty.
Gambier	15 cents per pikul
Gutta percha	2½ per cent. *ad valorem*
Rembia ataps	10 ,, ,,
Nipah ataps	Graduated from 75 cents to $1.50 per 1,000
Other kinds	10 per cent. of the wholesale prices in the centres of production
Getah rambong (India-rubber) ...	$5 per pikul
Formosa camphor	10 per cent. *ad valorem*
Kepong bark	10 ,, ,,
Gold	2½ ,, ,,
Tin-ore—	
When the price of tin does not exceed $41 per pikul	$2.40 per pikul
When the price of tin exceeds $41 but does not exceed $42	$2.52 ,,
When the price of tin exceeds $42 but does not exceed $43	$2.64 ,,
and so on, the duty per pikul being increased by 12 cents per every dollar by which the price of tin exceeds $41	

Description of article.	Duty.
In the case of tin-ore exported otherwise than under such guarantees as the Chief Secretary may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, additional duty of $30 per pikul ...	
Tin, smelted or manufactured from tin-ore won in the Federated Malay States	On the same scale as that for tin-ore, together with an additional duty of one-third of the duty on tin-ore
Additional duty on all tin-ore exported	15 cents per pikul or part of a pikul
Tin slag and hard-head of tin	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smelted or manufactured on the amount of tin estimated to be contained in such consignment
Scheelite	$2 per pikul
Wolfram	$2 ,,
All other metals and metalliferous ores	10 per cent. *ad valorem*
China-clay or kaolin	75 cents per ton
Potash-felspar or soda-felspar intended for use as a flux or a glaze	2½ per cent. *ad valorem*
China-stone	2½ ,, ,,
Blachan	50 cents per pikul
Fish, dried and salted, fish maws, fish refuse, ikan gelama, prawns (dried)	10 per cent. *ad valorem*
Oysters, fresh	$5 per pikul
Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,
Elephants	20 ,, ,,

EXCISE DUTIES.

Chinese samsu including medicated samsu	$9 per proof gallon
Other intoxicating liquors	$11 ,, ,,
Matches	9 cents per 1,000 matches where both matches and containers are made from imported timber 8 cents per 1,000 where both matches and containers are made from local timber

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVI.

Miscellaneous.

ELECTRICAL DEPARTMENT.

The year 1934 was an extremely satisfactory one for the Electrical Department. The improved trading conditions, especially during the second half of the year, enabled practically all Government electrical undertakings throughout the Federated Malay States to improve their output.

This improvement was most marked in the Kuala Lumpur supply area, and great activity was necessary to meet the increasing demand. Reviewing the past few years, the units generated and units sold were:

Year.	Units generated.	Units sold.
1929	23,850,345	19,714,149
1931	21,494,177	16,503,311
1932	18,339,387	13,293,884
1933	20,689,248	14,283,405
1934	34,256,983	25,238,948

Progress in some of the other undertakings is indicated as follows:

UNITS GENERATED OR PURCHASED.

	1933.	1934.
Ipoh	2,404,665	2,732,664
Taiping	726,537	851,432
Seremban	1,030,139	1,082,721
Kuala Lipis	197,185	212,839

As the sale of electrical energy is an indication of trade conditions, it is interesting to note the rapid improvement which took place during the second half of 1934. The number of units sold in Kuala Lumpur and district from 1st January to 30th June was 9,601,128 and from 1st July to 31st December, 15,637,820.

All stations were maintained in a high state of efficiency and no breakdowns, resulting in serious restriction of supply, occurred.

The number of installations generating electricity in the Federated Malay States in 1933 and 1934 was as follows:

	1933.	1934.
Perak	88	82
Selangor	34	36
Negri Sembilan	15	13
Pahang	7	10
Total	144	141

The total capacity of generating plant installed also showed a slight reduction, being 119,540 kilowatts in 1934 as compared with 127,222 in 1933. But the total units generated increased from 141,195,497 in 1933 to 226,744,934 in 1934.

Of these units 39,712,641 were generated or purchased by Government undertakings, the balance being generated by private plants.

Four fatal accidents due to electric shock occurred during the year as compared with three during 1933.

COMPANIES.

COMPANIES ESTABLISHED IN THE FEDERATED MALAY STATES.

During the year 26 local companies with a total nominal capital of $6,090,000 were incorporated and registered as compared with 15 with a total nominal capital of $2,648,000 in 1933 and 26 with a total nominal capital of $7,376,857 in 1932.

The largest number of companies incorporated and registered in any recent year was 56 ($35,764,500) in 1926 and 54 ($38,934,928) in 1920.

The main objects of the new companies were: amusement and entertainment (3), banking (1), cheetus (1), charity (1), farming (1), financing (1), general trading (4), gold mining (1), marble works (2), mining (2), printing and newspapers (1), rubber planting (3), rubber dealing (1), restaurant (1), trust and agency business (2) and tobacco (1).

Thirty-eight companies were in voluntary liquidation and three in compulsory liquidation in the Federated Malay States. No winding-up orders were made during the year.

There were 420 companies on the registers at the end of the year, 243 having been struck off as dissolved or defunct.

COMPANIES ESTABLISHED OUTSIDE THE FEDERATED MALAY STATES.

Twenty-nine companies were brought on to the Federated Malay States registers in 1934 as compared with 38 and 27 in 1933 and 1932, respectively. The objects of these companies were briefly: amusement and entertainment (1), electrical engineering (1), general trading (4), general petroleum and oil trading (2), gold mining (1), insurance (3), money-lending business (1), matches manufacturing (1), rubber planting (7), shipping (5) and tin mining (3).

Since the coming into force on 1st January, 1933, of Enactment 40 of 1932, 18 companies were known to be in voluntary liquidation during the year. Six of these voluntary liquidations were commenced prior to 1934.

At the end of 1934, 730 companies were on the registers as compared with 1,002 on 31st December, 1933.

Nine fire insurance companies and twenty-six life assurance companies were on the registers as at 31st December, 1934, a decrease of two in the former category during the year.

COMPANIES LIQUIDATION.

The liquidation of three companies which is in the hands of the Official Receiver is approaching completion. As the assets of one of these companies were situated in the Kingdom of Siam, the liquidation gave rise to considerable difficulties, legal and otherwise.

BANKRUPTCY.

During the year, 191 bankruptcy notices and 80 bankruptcy petitions were filed; 54 receiving orders and 53 adjudication orders were made as compared with 338 notices, 127 petitions, 73 receiving orders and 72 adjudication orders in 1933.

Of the persons adjudicated bankrupt, 20 were Chinese, 12 Ceylonese, 12 natives of India, 7 Malays, 1 Eurasian and 1 European.

By occupation, 18 were Government clerks, 2 commercial clerks, 1 lawyer's clerk, 8 traders, 3 shop-keepers, 3 hospital dressers, 2 miners, 2 landowners, 1 contractor, 1 book-binder, 1 dhoby, 1 warder, 1 planter, 1 fitter, 1 baker, 1 process server and 6 of miscellaneous occupation.

Insolvency showed continued marked decrease in Perak, Selangor and Negri Sembilan. The main Bankruptcy Office is in Kuala Lumpur with a branch office in Ipoh.

Two compositions were accepted by creditors during the year. There were 30 discharges, 8 in Perak, 20 in Selangor and 2 in Negri Sembilan all of which were subject to various periods of suspension from one month to two years.

There was 1 prosecution against a bankrupt during the year.

The gross liabilities and assets as stated by debtors were $432,838 and $187,819, respectively, as compared with $1,180,013 and $691,668 in 1933. There was only one failure with estimated liabilities of over $50,000 but under $100,000 and one of over $150,000 but under $200,000. The latter is the estate of a deceased person administered under section 113 of the Enactment.

The decrease in trade bankruptcies is undoubtedly due to improved trade and increased circulation of money largely the result of the rising tendency in the price of rubber subsequent to the introduction of the international control of the production of that commodity. It is also an indication that the really weak and irresponsible trading concerns have been eliminated and that the trading structure of the country is in a sounder condition generally.

DEPARTMENT OF THE PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the twelfth year of the working of the Department of the Public Trustee.

During the year the Public Trustee accepted 24 trusts in all valued at $520,499; 20 trusts were wound up and at the end of the year 100 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at $3,048,190.

The office of the Official Administrator, Federated Malay States, created in the year 1928, is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1934 was 28 valued at $250,386; 7 estates were wound up and at the end of the year 61 were still being administered.

The total number of trusts and estates administered by the Public Trustee and Official Administrator as at 31st December, 1934, was 161 valued at over $4,000,000. The total fees collected by the combined offices during the year amounted to $23,604.

CO-OPERATION.

Expenditure. The total expenditure for the calendar year on all counts was $124,710.

Progress. The position at the end of the year was as follows:

—	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit Societies	60	1,581	75,129	30,005	118,442
Non-Agricultural Thrift and Loan Societies	30	13,539	2,743,000	238,547	3,004,147
Indian Labourers' Societies	137	19,416	353,622	2,549	356,171
Registered but not working	1				
Unions ...	3				
Co-operative Rubber Societies	2	74	402	177	579
Co-operative Urban Union	1	6*	585	700	1,285
Total ...	234	34,610†	3,172,738	271,978	3,480,624

* Societies. † Societies not included.

In addition, the following types of societies were registered and working, but had no regular financial transactions:

Type.	No.
General purposes societies:	
(*a*) Malay rural	13
(*b*) Indian settlers	2
Better living societies	5
Fairs	6
Sales and purchases and marketing societies	3
Total ...	29

Rural Credit Societies.

The year was a difficult one for agriculturists. The price of padi remained low, while coconuts provided a very meagre livelihood for those dependent on them. Owners of mature rubber were in a better position towards the end of the year, but this improvement is not yet fully reflected in the statistics of the societies.

In spite of low prices, repayments of principal ($10,259) exceeded new loans given during the year by $4,658.

Though the membership of Rural Credit Societies has fallen by 72, there was more enquiry in rural areas about joint action on a co-operative basis than there has been since prices fell. The experience of the past few years has undoubtedly stimulated thought, if it has not yet led to much action.

General Purposes Societies.

Initial efforts to satisfy common needs by joint action have been made in numerous kampongs by the formation of General Purposes Societies. They are plants of delicate growth and not all will survive. Over 30 such societies are under organisation, though only 13 were registered at the close of the year. The activities of these societies have included the maintenance of mosques and burial grounds, the provision of a reading room and newspapers, the organisation of thrift, the improvement of water supply, the improvement of kampong sanitation, the organised destruction of rats, the building of a school, the cleaning of drains and the marketing of various rural products.

Marketing Societies.

The egg marketing societies in Krian carried on a steady business during the year, disposing of 308,255 eggs for a net return of $5,756 or an average of $1.86 per 100 eggs.

In spite of the improvement in the price of rubber during the year, it has been found difficult to revive the co-operative rubber societies which were dormant during the period of low prices. On the other hand, a general improvement in quality and smoking of small holders' rubber is reported and there are instances in which General Purposes Societies are interesting themselves in the joint operation of smoke-houses.

Co-operative shops.

Many groups in rural areas have established shops. Advice has been given wherever the prospects appeared to warrant it, but most shops have got into difficulties owing to bad book-keeping or too generous extension of credit. The experience may have been of value, even where the experiment failed.

Thrift and Loan Societies.

Two new societies were registered during the year. The total membership increased by 2,591 from 10,948 to 13,539, the paid-up subscriptions from $2,408,700 to $2,743,000 and the Reserve Funds from $227,539 to $238,547. The amount of loans granted was to the value of $1,568,400 for the 12 months as compared with $1,134,000 for the previous 12 months. Overdue loans decreased from $14,000 to $4,900.

Money invested in gilt-edged securities or held on fixed deposit amounted to $1,742,850 as compared with $1,699,353 on the 31st December, 1933. The gross average savings of members in these societies decreased from $220 to $202 and the net average savings from $149 to $116. This is attributable to the large increase in membership and the heavy borrowing for the purpose of liquidating debts.

Indian Labourers' Societies.

Societies amongst Indian labourers were popular, and 12 new societies were registered, while two old societies were amalgamated with others. The total number of registered societies amounted to 138 with a membership of 19,416 as compared with 128 societies with a membership of 15,971 at the end of the previous year. The total subscriptions increased from $237,383 to $353,622 while the average savings per labourer increased from $14.20 to $18.20.

LANDS.

The area in private occupation at the end of the year amounted to about 2,545,309 acres under agricultural titles and 205,137 acres under mining titles.

It is estimated that of the 27,500 square miles covered by the four States of the Federation, 14.46 per cent. is land in private occupation and 26.77 per cent. is reserved forest, while the balance of 58.77 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

The full effect of the retrenchment measures of the preceding years became apparent in 1934 when expenditure was lower than in any year since the formation of the department in 1908. The demand for title surveys was maintained at the level of the previous year and some progress was made with topographical surveys, 587 square miles being added to the standard one inch to one mile map.

From the inception of rubber regulation the resources of the department were placed freely at the disposal of the officers administering the scheme. Among the many and varied duties undertaken the most important were the supervision of the inspection and assessment of all small and certain medium rubber holdings and the printing of the coupons which were needed as part of the machinery for controlling the production and export of rubber by holdings of under 100 acres.

For assessment work a number of experienced planters were engaged. They were assisted by subordinate officers or ex-officers of the Survey Department and had, by the end of the year, determined final assessments for some 106,000 holdings, two-thirds of the total. Precautions were taken to ensure uniformity in assessing productivity and, as a safeguard against errors, nearly 40 per cent. of the holdings assessed were re-inspected independently.

The four million coupons required for the first issue were, owing to necessarily short notice, printed under the pressure of great urgency and for days on end the staff of the Photo-Litho Branch of the department were working from daylight till nearly midnight. To reduce the risk of counterfeiting the design for each denomination was altered each quarter and, although two attempts at forgery were detected, none were discovered in circulation. Altogether nine and a half million coupons were printed between May and December.

Routine meteorological observations were continued at the seventeen main stations and at a very large number of auxiliary stations. The Singapore station was removed from Mount Faber to a site on the new civil aerodrome at Kallang, observations at the new station commencing on the 1st June. The increase in civil aviation necessitated the provision of telephones at all stations along the main air route and the establishment of a special routine service for aircraft carrying mails. Arrangements were made for closing the branch office at Kuala Lumpur in order to concentrate the whole of the office staff in Singapore. This became necessary on account of the calls of civil aviation, and its efficacy was well illustrated by the special organisation set up for the MacRobertson International Air Race.

GEOLOGY.

The detailed geological survey of the gold-belt was continued in Pahang, and the discovery, mentioned in last year's report, that the gold-lodes of the Raub Mine were derived from a small laccolith of granite-porphyry, has received additional confirmation. Similar intrusions have now been found near alluvial gold-deposits in the Lipis district, but no important new occurrences of gold-quartz have been located.

The alluvial gold-deposits of the Batang Padang district received increased attention from miners and prospectors, and the output for the year rose to nearly 4,000 ounces, some of it being recovered as a by-product in tin-mining. The geological survey of about 120 square miles was completed. It is thought that some gold has been derived from mineralized schist and phyllite near the granite contact of the Main Range. Gold also has come from parts of the Changkat Rembian granite which have been highly foliated, and from the sedimentary rocks near its contact. Although it is possible that gold-quartz will be found in quantity sufficient for mining, yet the prospects for lodemining are not regarded as promising. The veins that are known are small. The output of alluvial gold will probably show a small increase during the next few years.

Geological reports were made on mineral deposits and engineering schemes. The central record of prospecting results proved useful in giving information about areas that were being considered for alienation for purposes other than mining. The usual analyses of metals, minerals, and oils were done for the public and for Government departments.

PLANTERS' LOANS BOARD.

Agricultural loans.

On 1st January, 1934, the Board had outstanding twenty-eight loans aggregating to $711,654.

It lent in additional loans (two) during the course of the year a further $51,075; while two properties repaid their loans in full to the extent of $28,000, fifteen others made partial repayments totalling $46,684 and balances not required by two estates, $1,700, were written back.

At the end of the year, the number of agricultural loans was thus reduced to twenty-six totalling $686,345, against which $680,038 was actually outstanding.

Urban loans.

Urban loans, at the beginning of the year, totalled eighty-seven amounting to $945,373. No new loans were made during the year. Repayment in full was made by nine borrowers to the extent of $81,230, fifty-eight others made partial repayments totalling $146,552 and balances not required, $8,000, were written back.

At the end of the year, the number of urban loans totalled seventy-eight aggregating $709,592 while the amount actually outstanding was $699,081.

War Service Loans.

Under the War Service Land Grant Scheme, at the beginning of the year seventy ex-soldiers were indebted to the Board, in respect of loans made to them, to the extent of $1,668,250.

Repayments during the course of the year were made in full by sixteen borrowers amounting to $400,000 while four others made partial repayments to the extent of $72,400.

At the end of the year 54 ex-soldiers continued to benefit under the scheme, the amount outstanding totalling $1,195,850.

Interest.

Interest earned during the year amounted to $104,002, of which $47,183 was in respect of agricultural loans and $56,819 in respect of urban loans.

Interest in respect of War Service loans was again remitted as a further measure of relief.

Interest collected totalled $142,849, while the amount credited to Federal revenue in respect of all monies outstanding was $131,984.

Profit and loss.

The net profit earned by the Board during the year was $18,461.

Reserves.

The reserves of the Board on 31st December, 1934, stood at $855,000.

Capital.

The capital of the Board is $4,000,000 created by the Planters' Loans Fund Enactment, 1915.

ESTATE DUTY OFFICE.

The total of estate duty collected throughout the Federated Malay States in 1934 was $367,902 as against $213,916 in 1933 and $194,667 in 1932.

The collection of duty continued to be difficult. No unusually large estates were declared and the total value of solvent estates declared and assessed during 1934 was $5,034,442 as compared with $4,207,945 in 1933 and $4,280,566 in 1932. The decreased value of the estates for the first seven months and the slightly increased value for the latter five months of the year caused a noticeable increase in the volume of work involved in the examination of the estates.

The prevailing adverse economic conditions not only depreciated severely the values of property on which estate duty was leviable but also added very considerably to the volume of current work in the Estate Duty Office: in many cases the valuation of property presented serious difficulties and the realisation of the duty when assessed involved protracted negotiations and payments by instalments over long periods.

MILITARY.

The strength of the 2/20th Burma Rifles stationed at Taiping was

British officers	17
Indian officers	18
Indian other ranks	662

on 31st December, 1934.

This is a battalion of trained men and their standard of efficiency has been well maintained during the period under review.

The strength of the Malay Regiment on the 31st of December, 1934, when it was still an experimental company, was:

British officers	3
British other ranks	3
Malay other ranks	146

Training continued, and a high standard of drill and discipline has been reached. Training has been carried out with ball ammunition both with the rifle and Lewis gun.

The unit found a guard of honour at Kuala Lumpur on the 22nd October, 1934, on the occasion of the opening of the Federal Council, and was congratulated by His Excellency the High Commissioner on its smartness.

Considerable progress has been made in the building of permanent barracks at Port Dickson, a large part of which it is hoped will be in occupation by the autumn of 1935.

Elaborate plans have been made to recruit 200 men from the Federated Malay States, and 30 men from Kedah and Kelantan, as the first expansion.

The title of the unit was altered to "The Malay Regiment" on 1st January, 1935.

VOLUNTEERING.

There was a slight but welcome increase in the strength of the Malay States Volunteer Regiment during the year. There are, however, still too many men of military age who are not members, and the proportion of men over 40 years of age in the Regiment is, unfortunately, still high.

Efforts are now being made by the heads of Government departments to bring home the importance of volunteering to their subordinates, and it is to be hoped that their example will be followed with good results by civil firms.

The Malayan Volunteer Infantry is slightly below establishment, due partly to some difficulty in obtaining recruits up to the required physical standard. The recent reduction as regards height, to conform to that of the Malay Regiment will, it is anticipated, result in the desired increase.

Efficiency.—Owing to the improvement in economic conditions and a corresponding increase in trade, without however any appreciable increase in staffs of firms and estates, many volunteers have found it even more difficult to attend training and camps than in the past. This will, however, it is to be hoped, be overcome during the next year or two when more young men may be expected to arrive in this country. In spite of this, however, the Force has further increased in efficiency during the year, and, owing to the re-arming of a large proportion of the Malay States Volunteer Regiment with machine guns and to the increased proficiency with Lewis guns throughout the Force, its value has been greatly enhanced and it is better prepared to carry out its role than it was before.

In Perak, Selangor and Negri Sembilan the Malayan Volunteer Infantry have continued to increase in efficiency.

Reorganisation.—Owing to the very low strength of machine gun units mentioned in the report for 1933 seven rifle platoons of the Malay States Volunteer Regiment in the larger centres were converted to machine gun platoons. This has led to a marked increase in keenness in those units.

At the beginning of the year a unit known as "X" Platoon was formed of those volunteers who were members of the Kuala Lumpur Flying Club and who were desirous of being trained in the duties of an army co-operation air unit. Great keenness has been shown and much useful work done. The Royal Air Force, Far East, has co-operated most helpfully in the training of this unit and a close liaison has been established.

Administration.—The end of this training season marks the third year of the amalgamation of the Malay States Volunteer Regiment and the Malayan Volunteer Infantry, and the administration of the Federated Malay States Volunteer Force is now on a sound footing. The armament, equipment, and training of the Malayan Volunteer Infantry are now identical with those of the Malay States Volunteer Regiment. This has created a spirit of esprit de corps that was non-existent before and which was not possible under a system of separate units and divided control.

MALAY ADMINISTRATIVE SERVICE.

In March, 1910, a scheme for the employment of Malays in the Public Service (Higher Subordinate Class) was introduced with the object of training boys of good family to fit them for high and responsible appointments in the Government service. The officers appointed under that scheme were styled Malay Assistants. Probationer Malay Assistants were selected from boys who had passed the 7th Standard at the Malay College, Kuala Kangsar. After selection they had to undergo a three-year course of study in the College and show proficiency in official correspondence, Treasury work and other prescribed subjects before being appointed as Malay Assistants, Grade III. On promotion to Grades II and I of the scheme Malay Assistants were eligible to serve as Settlement Officers and in other appointments of similar status. There was provision for a Special Class consisting of two Magisterial appointments, three appointments of Assistant District Officer, one of Malay Assistant and one of Assistant Conservator of Forests. The salary scale of the various grades, including the Special Class, was the same as that of the General Clerical Service in force at the time. The scheme also held out hope to officers in the Special Class of promotion to higher appointments in the Civil Service, thus envisaging the possibility of further development should the work and ability of officers on the scheme justify further advancement.

The outbreak of the Great War, making it necessary for Government to free as many of its European officers as possible for military duty, resulted in a considerable increase in the numbers of Malay Assistants appointed to higher and more responsible posts, and in 1917 it was decided to introduce a new scheme which opened to the Malay Officers a well-paid administrative career. The passing of the Cadets' Law Examination was introduced into this scheme as a condition for promotion to the Special Class.

The 1917 scheme was in turn superseded in 1921 by another scheme which provided that boys educated in English schools other than the Malay College, Kuala Kangsar, should be eligible to compete for 50 per cent. of the annual number of vacancies for probationerships. There were at the time of the introduction of this revised scheme in 1921 twelve Malay Officers who were performing the duties of Civil Service appointments or of additional appointments open to Cadets. The number of Malay Officers at end of 1921 was 50 and there were in addition 23 Probationers.

The Malay Administrative Service Scheme in its present form dates from 1930. Appointments as Probationers in the Malay Administrative Service are open to Malays who have passed [illegible] School Certificate examination and are over 18 and under 20 years of age. Vacancies are filled by the Chief Secretary to Government on the recommendation of a Selection Board, a minimum of 50 per cent. of the posts being reserved for boys from the Malay College, Kuala Kangsar. Successful candidates undergo a course of study in Law and General Orders at the Malay College, Kuala Kangsar, for a period of one year, and thereafter remain on probation for at least two years during which period they have to pass the examination in General Orders and Colonial Regulations set for Cadets of the Malayan Civil Service and also an oral examination on subjects connected with the actual work they have been doing. Thereupon they become Malay Officers, Class III, on a salary scale of $150-a10-$170 per annum. After serving for three years in this Class and provided they have passed the examination in Law prescribed for Cadets of the Malayan Civil Service, Malay

Officers are promoted to Class II on a salary scale of $200-A10-$300 per mensem. There are 22 appointments in Class II mainly consisting of Deputy Assistant District Officerships.

Malay Officers in Class II with not less than seven years' service become eligible for promotion to Class I. Promotion to Class I is not automatic or by seniority but depends on the occurrence of vacancies and is by selection according to merit and qualifications. There are 27 posts in this Class, the salary scale of which is $330-A15-$420 per mensem. Officers in Class I are called upon to function as Assistant District Officers, Second Magistrates and in other appointments of a similar status and responsibility, many of which were formerly in the cadre of the Malayan Civil Service.

The declared policy of Government is that Malay Officers of the Malay Administrative Service who by reason of their character, ability and industry have shown their fitness should be promoted to the Malayan Civil Service. Officers of Class I of the Malay Administrative Service who have served in that Class for at least three years are eligible for promotion to the Malayan Civil Service for service in the Federated Malay States only: such promotions being made by selection according to merit and depending upon vacancies in the authorised cadre. At the end of the year under review 15 Malay Officers had been promoted to the Malayan Civil Service.

GENERAL.

His Majesty the King was graciously pleased to confer the following honours:

Honorary Knight Commander of the Most Distinguished Order of St. Michael and St. George	His Highness Tuanku Abdulrahman ibni al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar of Negri Sembilan

At the New Year—

Companion of the Most Distinguished Order of St. Michael and St. George	William Sumner Gibson, Esq., Malayan Civil Service, lately Legal Adviser, Federated Malay States
Officer of the Most Excellent Order of the British Empire (Military Division)	Lieutenant-Colonel Frederick John Ayris, V.D., Federated Malay States Voluntee. Force

Member of the Most Excellent Order of the British Empire (Civil Division)	Mrs. Marion Braddon
Honorary Member of the Most Excellent Order of the British Empire (Civil Division)	Tengku Mohamed ibni al-Marhum al-Sultan Ahmad al-Muadzam Shah, Assistant Commissioner of Police, Federated Malay States
The King's Police Medal	Edgar Charles Tidy, Esq., Assistant Commissioner of Police, Federated Malay States
The King's Police Medal	John Beaufoy James Birch, Esq., Assistant Commissioner of Police, Federated Malay States
The King's Police Medal	Detective Sub-Inspector Wong Kee Fook, Federated Malay States Police

On His Majesty's Birthday—

Knight Commander of the Most Excellent Order of the British Empire	Major-General Leopold Charles Louis Oldfield, C.B., C.M.G., D.S.O., late General Officer Commanding the Troops, Malaya
Companion of the Most Distinguished Order of Saint Michael and Saint George	Malcolm Bond Shelley, Esq., M.C.S., Acting Chief Secretary to Government, Federated Malay States
Officer of the Most Excellent Order of the British Empire (Civil Division)	John Arthur Stuart Jennings, Esq., Managing Director and Editor, "Times of Malaya", Ipoh
Companion of the Imperial Service Order	Gordon Eastley Greig, Esq., late Senior Warden of Mines, Federated Malay States

Certificates of Honour were awarded to the following in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Che Yeop Ibrahim bin Mohamed Zain;
Raja Alang bin Raja Abdul Jalil;
Che Mohamed bin Dato Muda;
Mr. Foo Wha Cheng, J.P.

Changes in the political structure of the Federation as a result of the decentralisation policy set out in Sir Samuel Wilson's report were commenced during the year; the first stages of that policy which have now been completed being the transfer of ten important departments of Government to State control and the enacting of the statutes appertaining to those departments as State laws. As a result of this transfer of authority and in accordance with the recommendation of Sir Samuel Wilson, the volume of Estimates entitled "Unreserved Services" was abolished in framing the 1935 Estimates, and the provision for the departments transferred from Federal to State control was allocated between the State and Federal Estimates, the State establishments of these departments being shown in the Estimates of the four States and their head-quarters establishments either in the Federal or the Colonial Estimates according as the head-quarters are situated in Kuala Lumpur or Singapore. Adjustment of head-quarters expenditure with the Straits Settlements is provided for, as in previous years, in an Appendix of the Federal Estimates.

Two other of the recommendations in Sir Samuel Wilson's report which were put into effect during the year were the creation of the Malayan Establishment Office and the establishment of the Malayan Postal Union. The former was inaugurated as from the 1st January, 1934, and is under the direction of an Establishment Board representative of the interests of the Colony, the Federated Malay States and the Unfederated States. All European officers concerned are now borne on the Malayan Establishment, the various Administrations jointly and severally bearing the recruitment charges, salaries, pensions, passage and leave expenses, etc., and the cost of the Establishment Office. The Malayan Postal Union at present comprises the Colony and the four Federated Malay States. The agreement for the constitution of the Union was executed on the 3rd February, 1934, and is so framed as to permit any Malay States under British Protection entering the Union. Under it the five Administrations have constituted their territories into a single postal area under the style of "Malaya" and adhere in one group to the Universal Postal Union by that name and style. The grouped Postal Departments are under the control of the Director-General of Posts and Telegraphs, Malaya, who is assisted by the Malayan Postal Board, on which each adhering Administration is represented.

The report of Sir Basil Blackett on the question of Malayan currency, to which reference was made in my predecessor's report last year, was published in August, 1934. In paragraph 34 (xi) of that report it was suggested that sums standing to the credit of the proposed All-Malayan (Currency Surplus) Fund should be distributed, subject to such changes as the participating Governments might jointly agree to defray from this Fund. A committee has been appointed to advise what charges could be reasonably submitted for such joint agreement, and the report of that committee is awaited before further action can be taken to implement the recommendations in the main report.

The waiver of all quit-rents in excess of $2 per acre, which was first granted in 1932, was continued in 1934.

It is gratifying to be able to record that the year 1934 was one of steady if moderate prosperity. The financial recovery made by the country was remarkable, but it will take several years of prosperity, and very careful handling of the country's finances, if the wastage of reserves occasioned by four years of depression is to be made good. World economic conditions are still very far from stable, and the Federated Malay States with their two staple products under artificial control, cannot afford to regard the future as definitely assured. Economy in expenditure and the careful husbanding of resources are still essential.

Sir Cecil Clementi, G.C.M.G., High Commissioner for the Malay States, proceeded to England on leave on the 17th February, 1934, but ill-health led to his subsequent resignation with effect from the 18th October. Mr. (now Sir) Andrew Caldecott, G.M.G., C.B.E., Colonial Secretary, administered the Government of the Straits Settlements and acted as High Commissioner for the Malay States until the arrival of Sir Thomas Shenton whitelegge Thomas, K.C.M.G., O.B.E., who assumed the office of High Commissioner in succession to Sir Cecil Clementi on the 9th November.

Mr. M. B. Shelley, C.M.G., continued to act as Chief Secretary to Government throughout the year.

M. REX,
Acting Chief Secretary to Government,
Federated Malay States.

KUALA LUMPUR,
3rd July, 1935.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33.477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,355	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,108. No figures for the other States are given prior to 1891.

Appendix A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888*	23,720	1,395,923	2,790,451*	9,469,446*	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	13,988,887	107,178	8,667,701	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,604,582	160,213	11,193,115	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,179	17,704,590	127,602	8,571,967	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,034,740	174,490	3,710,604	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584	84,660,975	201,393,405	349,012,595	67,041	15,424,409	261,352	4,312,922	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870	82,470,192	168,020,418	213,652,044	62,065	9,127,460	249,675	1,086,370	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659	62,163,328	106,201,211	125,177,183	51,250	5,502,101	243,886	547,411	4,832,700	12,912,579	1,723,117§	1931
1932	43,817,151	53,740,139	71,133,301	87,851,281	27,091	3,594,380	234,769	374,547	4,268,125	9,483,859	1,770,486	1932
1933	47,198,806	50,258,671	67,129,150	111,885,935	22,824	4,884,974	248,356	577,151	3,989,363	9,036,776	1,597,770	1933
1934	58,926,323	47,211,228	84,731,059	202,725,341	36,385	8,889,125	256,516	2,160,490	5,141,756	11,284,147	1,631,728	1934

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* As now corrected.
‖ Excluding bullion and specie.
§ *Vide* foot-note on page 118.
† The figures for previous years included items now omitted owing to reclassification of revenue.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1934.

Dr. *Cr.*

—	6 per cent.	4½ per cent.	Total.	—	—
	$ c.	$ c.	$ c.		$ c.
To Loan Expenses—				By Loan Subscription—	
Interest on Deferred instalments	268,092 28	110,958 96		(i) 6 per cent. 1936 to 1951 issued at £97 in December, 1921...	44,185,714 29
Composition Stamp Duty	552,321 42	360,000 00		(ii) 4½ per cent. 1935 to 1945 issued at £95 in May, 1922 ...	36,000,000 00
Discount on Issue Price	1,325,571 43	1,800,000 00			
Underwriting Commission	441,857 14	360,000 00			
Commission for obtaining Underwriting...	110,464 29	90,000 00			
Crown Agents' Commission	110,464 29	90,000 00			
Brokerage to Sundry Brokers and Bankers on the allotment of Stock	108,049 28	89,355 00			
Miscellaneous—Stamp, etc.	5,873 21	4,475 18			
Advertisement	31,052 18	29,630 03			
	2,953,745 52	2,934,419 17	5,888,164 69		
To Loan Works	...	...	73,806,423 36		
To Balance	...	...	491,126 24		
			$80,185,714 29		$80,185,714 29

APPENDIX C.

F.M.S. LOCAL LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1934.

Dr.	$ c.	$ c.	*Cr.*	$ c.
To Loan Expenses—			By Loan Subscription—	
(*a*) Discount on issue price ...	320,000 00		4½ per cent. issued at 98 in May, 1931	16,000,000 00
(*b*) Commission and charges ...	40,000 00			
		360,000 00		
To Loan Works	...	10,630,321 46		
To Balance	...	5,009,678 54		
		16,000.000 00		16,000,000 00

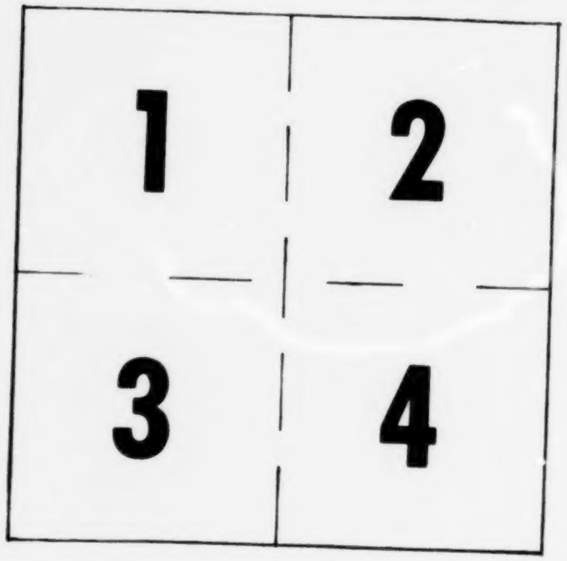
APPENDIX D.

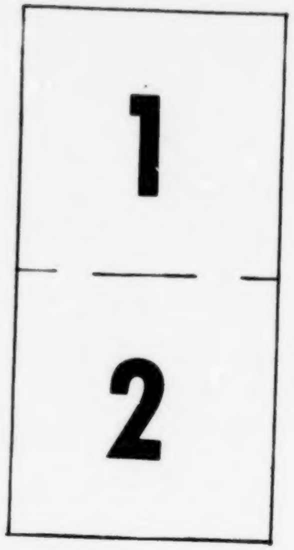
LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

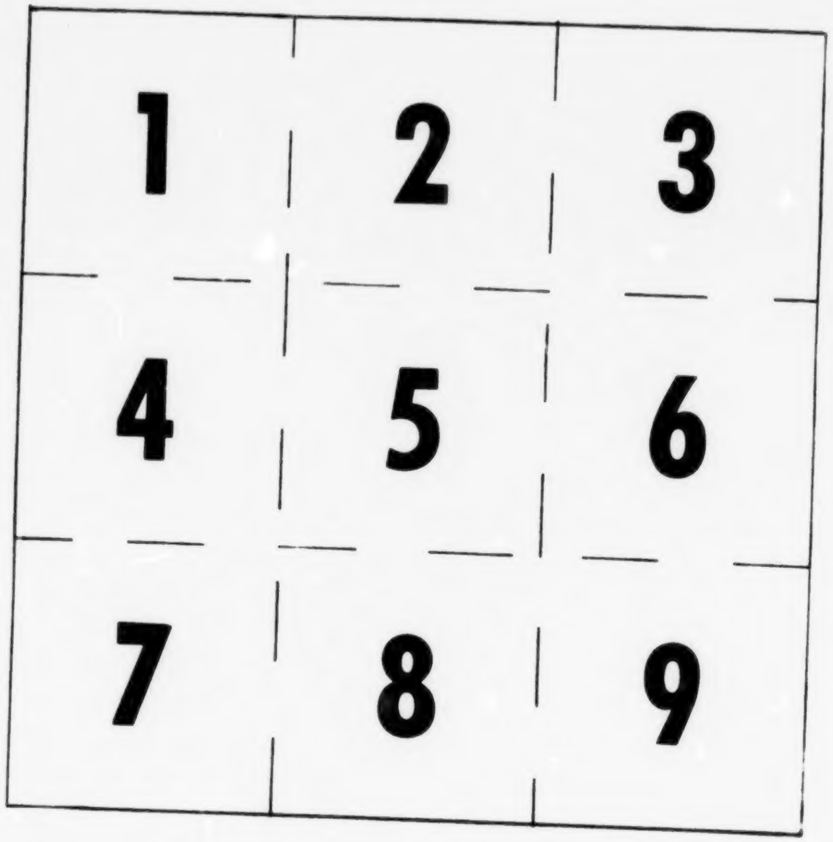
	Cost. $ c.	Where obtainable.
Census Report, British Malaya, 1931	5 00	... Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of British Malaya ...	1 50	... Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of Malayan Agriculture	1 00	... Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 60	... Printing Department, Kuala Lumpur, Federated Malay States.
Treaties and Engagements affecting the Malay States and Borneo	3 50	... Printing Department, Kuala Lumpur, Federated Malay States.
Geology of Malayan Ore Deposits	8 00	.. Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Geology of Malaya	8 00	... Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free	... Malayan Information Agency, 57, Charing Cross, London.
Fisheries of British Malaya ...	5 00	... Printing Department, Kuala Lumpur, Federated Malay States.
Commercial Timber Trees of the Malay Peninsula	5 00	... Adviser on Forestry, Malay States, Kuala Lumpur.
Report on the Wild Life Commission (Three volumes) ...	12 00	... Government Printer, Singapore.

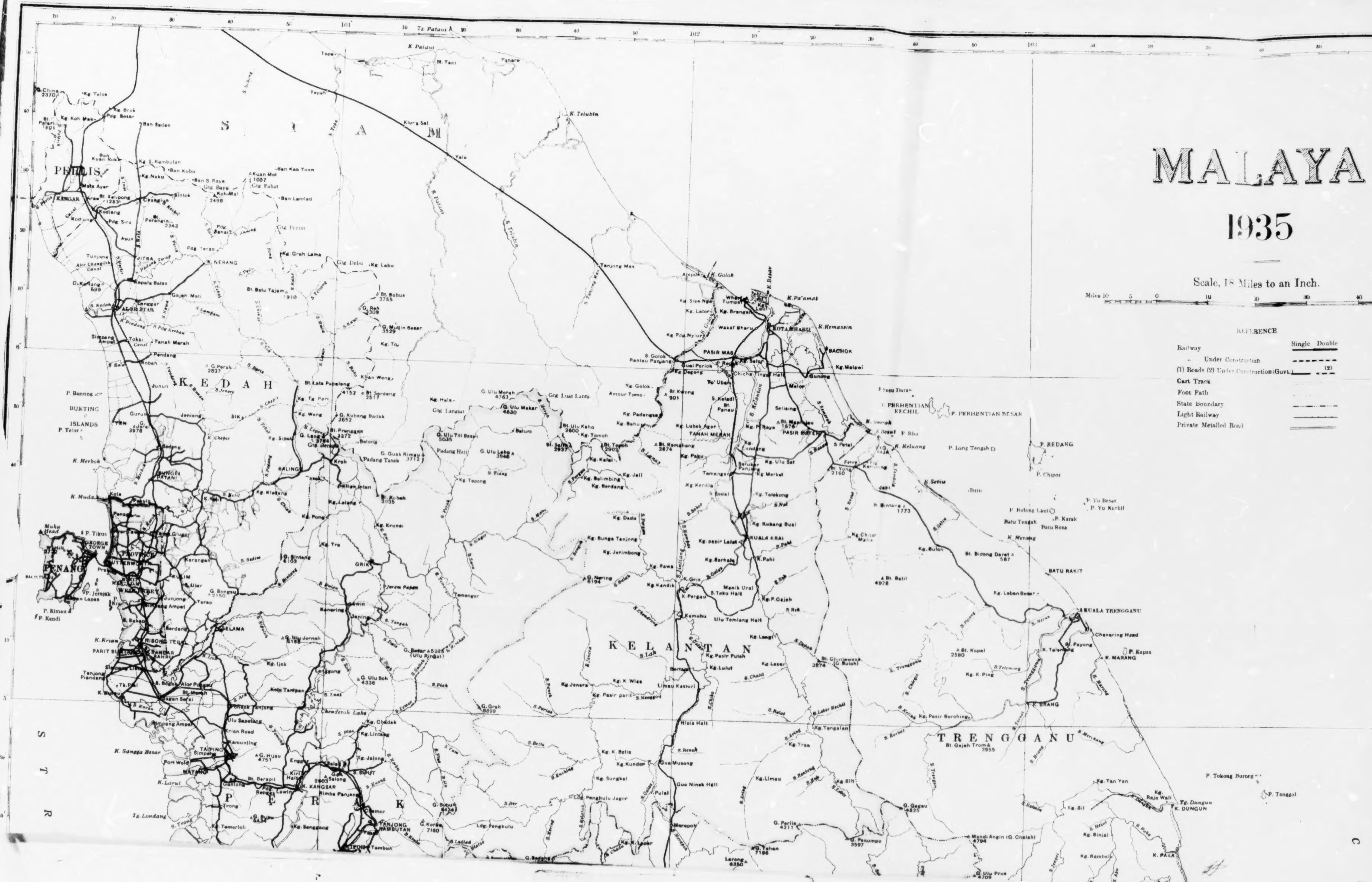
Federated Malay States Government Press.

Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.









MALAYA

1935

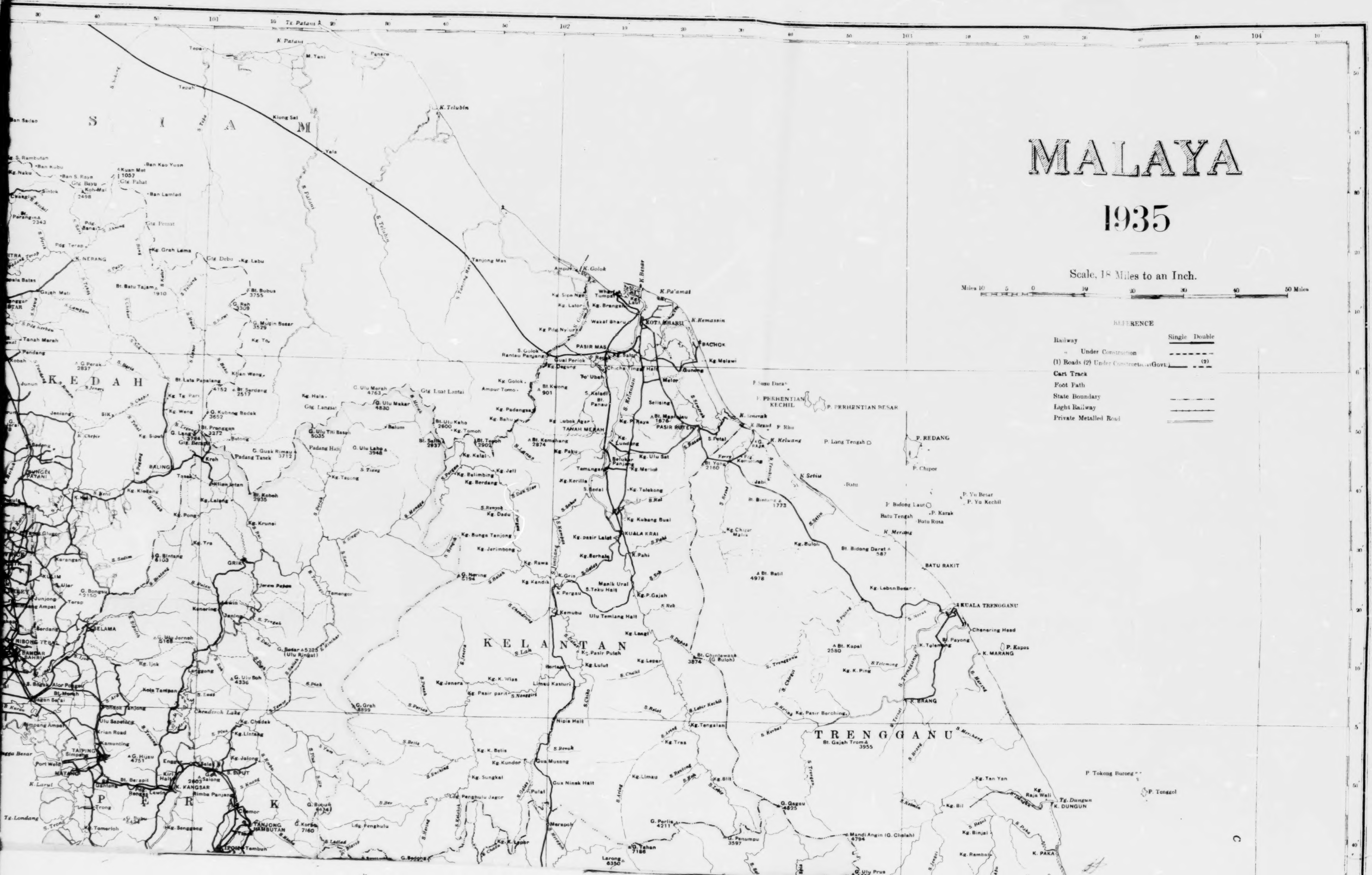
Scale, 18 Miles to an Inch.

Miles 10 5 0 10 20 30 40

REFERENCE

	Single	Double
Railway		
" Under Construction		
(1) Roads (2) Under Construction (Govt.)		(2)
Cart Track		
Foot Path		
State Boundary		
Light Railway		
Private Metalled Road		

S I A M
PERLIS
K E D A H
K E L A N T A N
T R E N G G A N U
P E R A K
S T R
C
PENANG
GEORGE TOWN
PROVINCE WELLESLEY
BUTTERWORTH
ALOR STAR
KANGAR
JITRA
SUNGEI PATANI
BALING
KULIM
NIBONG TEBAL
PARIT BUNTAR
BAGAN SERAI
TAIPING
MATANG
Port Weld
K. KANGSAR
TANJONG RAMBUTAN
IPOH
GRIK
SELAMA
KOTA BHARU
PASIR MAS
TUMPAT
BACHOK
PASIR PUTEH
TANAH MERAH
KUALA KRAI
Gua Musang
KUALA TRENGGANU
K. DUNGUN
K. MARANG
BATU RAKIT
K. Besut
K. Golok
K. Telubin
K. Patani
Yala
Tanjong Mas
K. Pa'amat
K. Kemassin
P. PERHENTIAN KECHIL
P. PERHENTIAN BESAR
P. REDANG
P. Lang Tengah
P. Kapas
P. Tenggol
P. Tokong Burong
BUNTING ISLANDS
P. Bunting
P. Telor
K. Merbok
K. Muda
Muka Head
P. Jerejak
P. Rimau
P. Kendi
K. Krian
K. Sangga Besar
K. Larut
Tg. Londang
Chenderoh Lake
Kg. Raja
K. Pahang
Chenering Head
G. China 2370
G. Jerai 3978
G. Perak 2837
G. Bongsu 2150
G. Ulu Merah 4763
G. Ulu Makar 4830
G. Ulu Titi Basah 5035
G. Ulu Laho 3946
G. Besar 5225 (Ulu Ringat)
G. Ulu Soh 4336
G. Hijau 4751
G. Bubu 5454
G. Korbu 7160
G. Gagau 4825
G. Tahan 7186
G. Perlis 4211
G. Penumpu 3597
Bt. Chinlawase 3874 (G. Buloh)
Bt. Gajah Trom 3955
Bt. Kapal 2580
Bt. Batil 4978
Bt. Bintang 1773
Mandi Angin (G. Chalah) 4794
Larong 6350

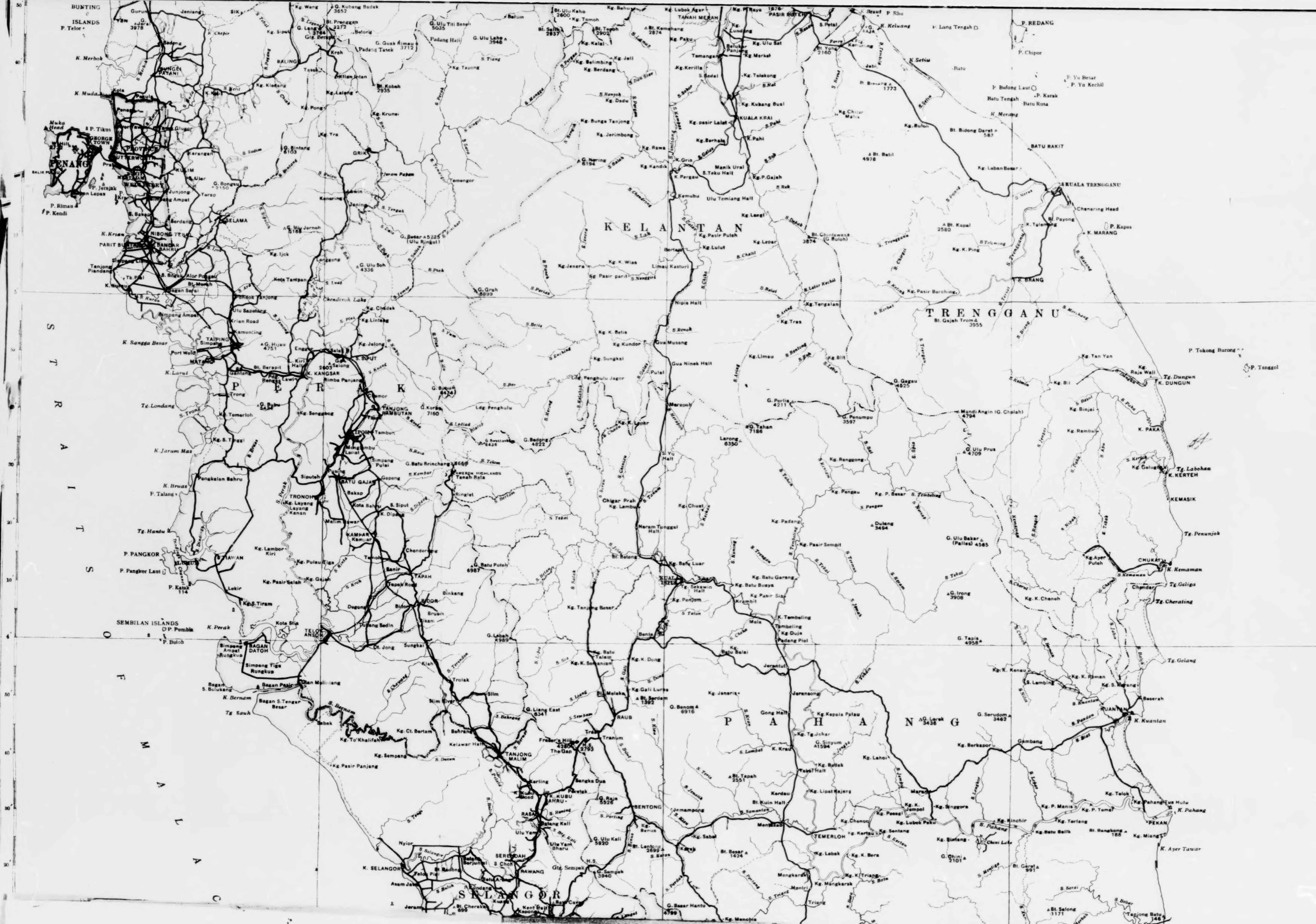


MALAYA

1935

Scale, 18 Miles to an Inch.

Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Railway Single Double
" Under Construction
(1) Roads (2) Under Construction (Govt.) (2)
Cart Track
Foot Path
State Boundary
Light Railway
Private Metalled Road
S I A M
K E D A H
K E L A N T A N
T R E N G G A N U
P E R A K
Yala
Tanjong Mas
K. Golok
K. Besar
K. Pa'amat
KOTA BHARU
K. Kemassin
BACHOK
PASIR MAS
Kg. Melawi
TANAH MERAH
PASIR PUTEH
K. Semerak
K. Besut
K. Keluang
P. PERHENTIAN KECHIL
P. PERHENTIAN BESAR
P. Susu Dara
P. Rhu
P. Lang Tengah
P. REDANG
P. Chipor
P. Yu Besar
P. Yu Kechil
P. Bidong Laut
P. Karak
Batu Tengah
Batu Rusa
K. Merang
BATU RAKIT
KUALA TRENGGANU
Chenering Head
Bt. Payong
P. Kapas
K. MARANG
K. Telemong
K. BRANG
Bt. Gajah Trom 3955
Kg. Tan Yan
Kg. Raja Wali
Tg. Dungun
K. DUNGUN
P. Tokong Burong
P. Tenggol
K. PAKA
G. Gagau 4825
Mandi Angin (G. Chalah) 4794
G. Penumpu 3597
G. Perlis 4211
G. Tahan 7186
Larong 6350
KUALA KRAI
Manik Urai
Ulu Temiang Halt
Kemubu
Nipis Halt
Gua Musang
Gua Ninek Halt
Merapoh
Pulai
Bt. Chintawasa (G. Bulch) 3874
Bt. Kapal 2580
Bt. Batil 4978
Bt. Bidong Darat 587
G. Besar 5225 (Ulu Ringat)
G. Ulu Soh 4336
G. Grah 8899
G. Korbu 7160
G. Bubu 5434
Grik
Temengor
Kenering
Lawin
Jenering
Sungei Siput
K. KANGSAR
TAIPING
Simpang
Kamunting
Port Weld
MATANG
Bt. Berapit
TANJONG RAMBUTAN
IPOH
Tambun
Chemor
Kota Tampan
Chenderoh Lake
Lenggong
Selama
Baling
Kroh
KULIM
SUNGEI PATANI
Tasek
Padang Tasek
Pedu
K. NERANG
Jeniang
Kuala Ketil
Bandar Baharu
Parit Buntar
Ulu Sepetang
Krian Road
Bagan Serai
Alor Pongsu
Jitra
ALOR STAR
Sintok
Changlun
Kuan Mot 1057
Ban Kao Yusm
Ban Lamlad
Ban Sadao
Ban Kubu
S. Rambutan
Pendang
Tanah Merah
Kg. Naku
Pdg. Terap
Klong Sai
Tepah
Tepa
K. Patani
M. Tani
Panare
K. Telubin
Bt. Lata Papalang 4752
Bt. Serdang 2517
G. Kubang Badak 3652
Bt. Pranggan 3272
G. Bintang 6103
G. Bongsu 2150
G. Ulu Jerneh 5168
G. Hijau 4751
G. Ulu Merah 4763
G. Ulu Makar 4830
G. Ulu Tiri Basah 5035
G. Ulu Laho 3948
G. Gusk Rimau 3712
Bt. Kemahang 2874
Bt. Kwong 901
G. Nering 2194
Bt. Bubus 3755
G. Mudin Besar 3529
Bt. Batu Tajam 1910
Bt. Kobeh 2935



KELANTAN
TRENGGANU
PERAK
PAHANG
SELANGOR
STRAITS OF MALACCA
PENANG
GEORGE TOWN
BUTTERWORTH
P. Rimau
P. Kendi
K. Muda
K. Merbok
BUNTING ISLANDS
P. Telor
SUNGEI PATANI
BALING
Kroh
GRIK
SELAMA
NIBONG TEBAL
PARIT BUNTAR
BANDAR BAHRU
Tanjong Piandang
Bagan Serai
TAIPING
Port Weld
MATANG
K. Larut
K. KANGSAR
Sg. SIPUT
IPOH
TANJONG RAMBUTAN
Chenderoh Lake
BATU GAJAH
TRONOH
Gopeng
KAMPAR
Kota Bahru
Tg. Hantu
P. PANGKOR
P. Pangkor Laut
SITIAWAN
LUMUT
K. Perak
SEMBILAN ISLANDS
TELOK ANSON
BAGAN DATOH
Simpang Tiga Rungkup
Bagan Pasir
Hutan Melintang
Sabak
K. Bernam
Tg. Sauh
TAPAH
BIDOR
Sungkai
Slim River
TANJONG MALIM
Rasa
KUALA KUBU BAHRU
Fraser's Hill
Ulu Yam
SERENDAH
RAWANG
K. SELANGOR
Batang Berjuntai
Kuang
CAMERON HIGHLANDS
Tanah Rata
Ringlet
G. Batu Brinchang 6660
KUALA KRAI
Manik Urai
Kemubu
Gua Musang
Merapoh
Kuala Lipis
Raub
BENTONG
Karak
MENTAKAB
TEMERLOH
Mengkarak
Triang
Jerantut
Tembeling
K. Tembeling
G. Tahan 7186
Chini Lake
S. Pahang
PEKAN
K. Pahang
Tg. Gelang
K. Kuantan
KUANTAN
Beserah
Gambang
CHUKAI
K. Kemaman
Tg. Geliga
Cherating
KEMASIK
K. KERTEH
Tg. Labohan
K. PAKA
K. DUNGUN
Tg. Dungun
P. Tenggol
P. Tokong Burong
KUALA TRENGGANU
Chenering Head
K. MARANG
P. Kapas
BATU RAKIT
K. BRANG
Bt. Gajah Trom 3955
P. REDANG
P. Lang Tengah
P. Chipor
P. Yu Besar
P. Yu Kechil
P. Bidong Laut
P. Karak
TANAH MERAH
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G. Bubu 5454
G. Besar 5225 (Ulu Ringat)
G. Nering 5194
G. Gagau 4825
G. Perlis 4211
G. Penumpu 3597
Mandi Angin (G. Chelah) 4794
G. Ulu Prus 4709
Dulang 3494
G. Ulu Baker (Palias) 4565
G. Irong 3908
G. Tapis 4958
G. Benom 6916
G. Serudom 3462
G. Lerek 3438
Bt. Serdam 1392
G. Liang East 6341
G. Raja 5526
G. Ulu Kali 5820
Bt. Tapah 2551
Bt. Besar 1424
G. Chini 2101
Bt. Gerat 991
Bt. Selong 1171
Tanjong Batu
K. Ayer Tawar
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G. Lebah 4989
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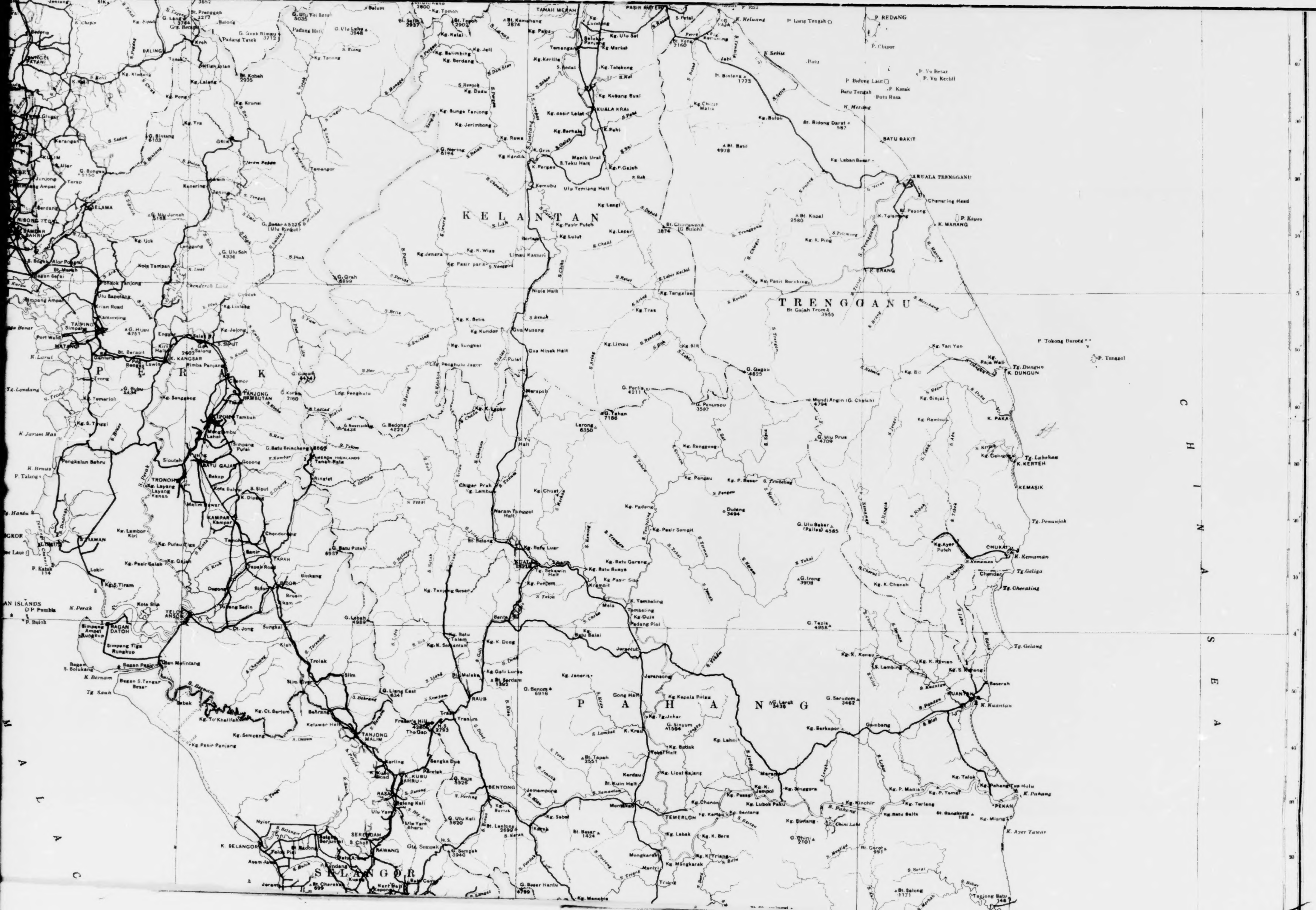
G. Grah 6899
G. Hijau 4751
Larong 6350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TAPAH
BIDOR
TELOK ANSON
BAGAN DATOH
SITIAWAN
LUMUT
SELAMA
BALING
SUNGEI PATANI
NIBONG TEBAL
BANDAR BAHRU
TANJONG RAMBUTAN
CAMERON HIGHLANDS
Tanah Rata
Ringlet
G. Batu Brinchang 6666
G. Korbu 7160
G. Tahan 7186
KUALA LIPIS
Benta
RAUB
Fraser's Hill
TANJONG MALIM
K. KUBU BAHRU
RASA
SERENDAH
RAWANG
BENTONG
Karak
Mentakab
TEMERLOH
Maran
Jerantut
Gambang
K. SELANGOR
Kuala Perak
K. Bernam
Tg. Sauh
P. Pangkor
Sungkai
Slim River
Trolak
Gua Musang
Kemubu
Merapoh
Bertam
Kg. Ayer Puteh
G. Ulu Bakar (Pallas) 4565
G. Irong 3908
G. Tapis 4958
G. Benom 6916
G. Lerak 3436
G. Serudom 3462
G. Gagau 4825
Mandi Angin (G. Chelah) 4794
Bt. Gajah Trom 3955
G. Perlis 4211
G. Penumpu 3597
Dulang 3494
Larong 6350
G. Liang East 6341
G. Ulu Kali 5820
Bt. Chintawasa 3874 (G. Buloh)
Bt. Kapal 2580
G. Ulu Prus 4709
Chini Lake
S. Pahang
S. Kelantan
S. Perak
S. Bernam
S. Selangor
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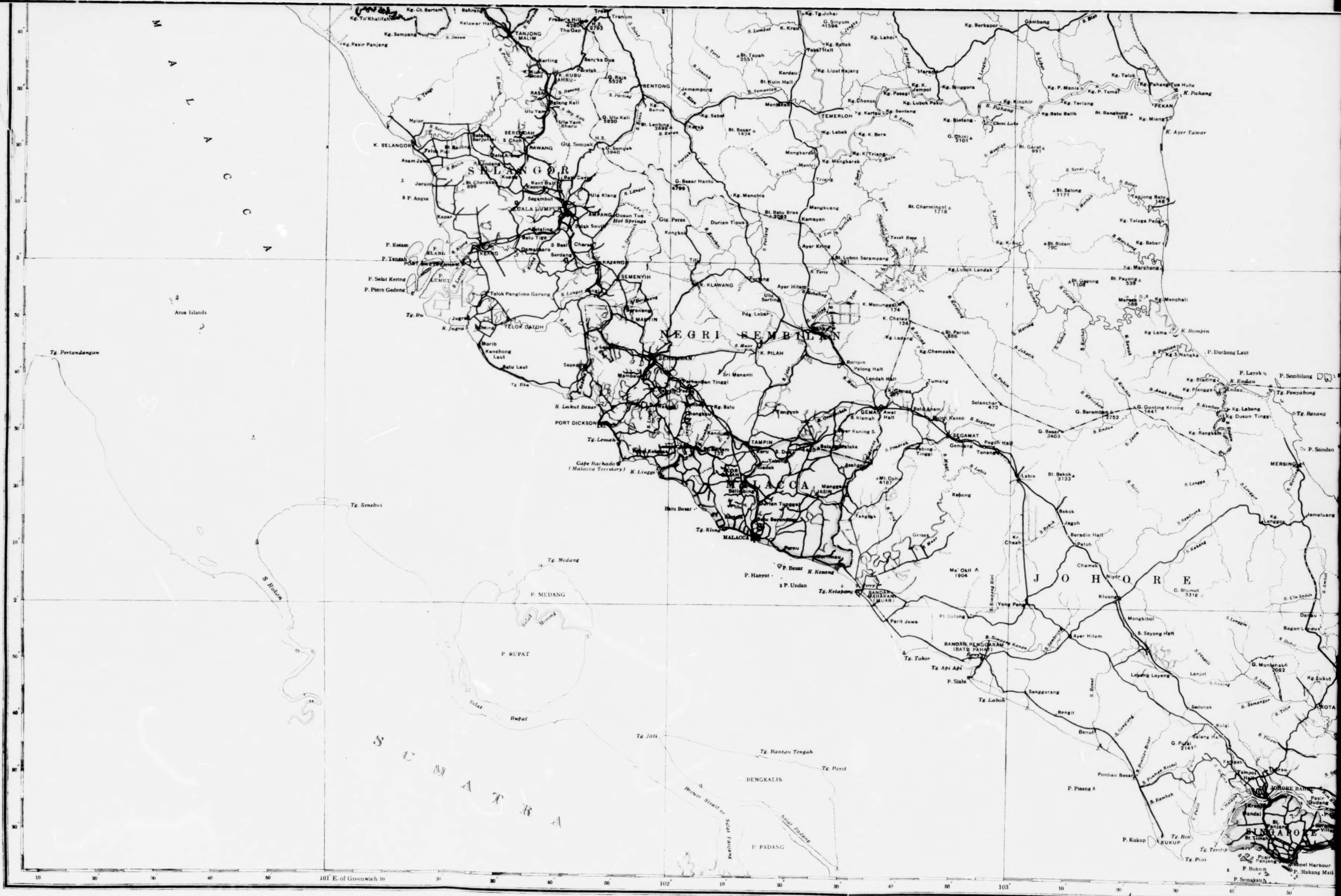
S. Lipis
S. Jelai
S. Nenggiri
S. Galas
S. Lebir


M A L A C C A
S U M A T R A
SELANGOR
NEGRI SEMBILAN
MALACCA
JOHORE
SINGAPORE
Kg. Ct. Bertam
Kg. To' Khalifah
Kg. Sempang
Kg. Pasir Panjang
Behrang
TANJONG MALIM
Kelawar Halt
Fraser's Hill
The Gap
Kerling
Kuala Kubu Bahru
Rasa
Batang Kali
Ulu Yam
Serendah
Rawang
Nyior
K. SELANGOR
Asam Jawa
Jeram
P. Angsa
Kapar
P. Ketam
P. Tengah
PORT SWETTENHAM
KLANG
P. Selat Kering
P. Pintu Gedong
Telok Panglima Garang
Jugra
TELOK DATOH
Morib
Kanchong Laut
Batu Laut
Sepang
KUALA LUMPUR
AMPANG
Dusun Tua Hot Springs
Gombak
Ulu Klang
Segambut
Batu Caves
Kepong
Petaling
Dengkil
Cheras
Kajang
Semenyih
Beranang
Mantin
BENTONG
Karak
Tranum
Gtg. Sempak
G. Ulu Kali 5820
G. Semangkok 3940
G. Besar Hantu 4799
Gtg. Peras
Kongkoi
Titi
K. KLAWANG
SEREMBAN
Mambau
Rantau
Ampangan
Port Dickson
K. Lukut Besar
Tg. Lemah
Cape Rachado (Malacca Territory)
Linggi
Batu Besar
Tg. Kling
MALACCA
Alor Gajah
Durian Tunggal
Bukit Serindit
Tampin
Gemencheh
GEMAS
Awal Halt
Rembau
Kuala Pilah
Sri Menanti
Pertang
Ayer Hitam
Ulu Serting
Triang
Mentri
Mentakab
TEMERLOH
Kg. Lubok Paku
Kg. Chenor
Kg. Mengkarak
Kg. Manchis
Bt. Batu Bras 2082
Durian Tipus
Kamayan
Mengkuang
Ayer Kring
Bt. Lubok Serampang
Kg. Lahoi
Kg. K. Jempol
Kg. Singgora
Kg. Kinchir
Kg. Pesagi
Kg. Senteng
Kg. Bintang
G. Chini 2101
Chini Lake
S. Pahang
Kg. Batu Balik
Bt. Bangkong 188
Kg. Terlang
Kg. P. Manis
Kg. P. Temai
Kg. Telok
Kg. Pahang Tua Hulu
K. Pahang
PEKAN
Kg. Mising
K. Ayer Tawar
Gambang
Kg. Berkapor
Bt. Geras 991
Bt. Selong 1171
Tanjong Batu
Bt. Charmingat 1718
Kg. Tolang Paian
Kg. Bebar
Bt. Ridan 790
Kg. Marchong
Kg. Lubok Landak
Bt. Gayong 1103
Bt. Payong 539
Merapoh
Kg. Menchali
Kg. Lama
K. Rompin
Kg. S. Nangka
P. Duchong Laut
P. Layak
P. Sembilang
Tg. Penyabong
Endau
Kg. Labong
Kg. Dusun Tinggi
Tg. Resang
Kg. Rangkam
P. Seindan
MERSING
Jemaluang
Kg. Lenggor
Kg. Menunggul
Kg. Chelau
Bt. Perioh 886
Kg. Chempaka
Rompin
Palong Halt
Landak Halt
Tumang
Selancher 472
G. Berembun 2752
G. Gunting Kriong 1441
G. Besar 3403
SEGAMAT
Genuang
Pagoh Halt
Tenang
Batu Anam
Buloh Kasap
Labis
Bt. Bekok 3133
Bekok
Jagoh
Beradin Halt
Paloh
Chamek
Niyor
Kluang
G. Blumut 3318
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Grisek
Ma' Okil 1904
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Yong Peng
Pt. Sulong
Bandar Maharani (Muar)
Tg. Ketapang
K. Kesang
P. Besar
P. Hanyut
P. Undan
Parit Jawa
BANDAR PENGGARAM (BATU PAHAT)
Tg. Tohor
Tg. Api Api
P. Sialu
Tg. Laboh
Senggarang
Rengit
Benut
Ayer Hitam
Mongkibol
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Kulai
Salang Halt
G. Pulai 2141
G. Muntahak 2082
Kg. Lukut
KOTA TINGGI
Pontian Besar
P. Pisang
P. Kukup
KUKUP
Tg. Bin
Tg. Piai
Tg. Teritip
Tampoi Halt
Johore Bahru
Pasir Gudang
Kranji
Mandai
Bt. Panjang
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Keppel Harbour
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Dangau
Bagan Lenang
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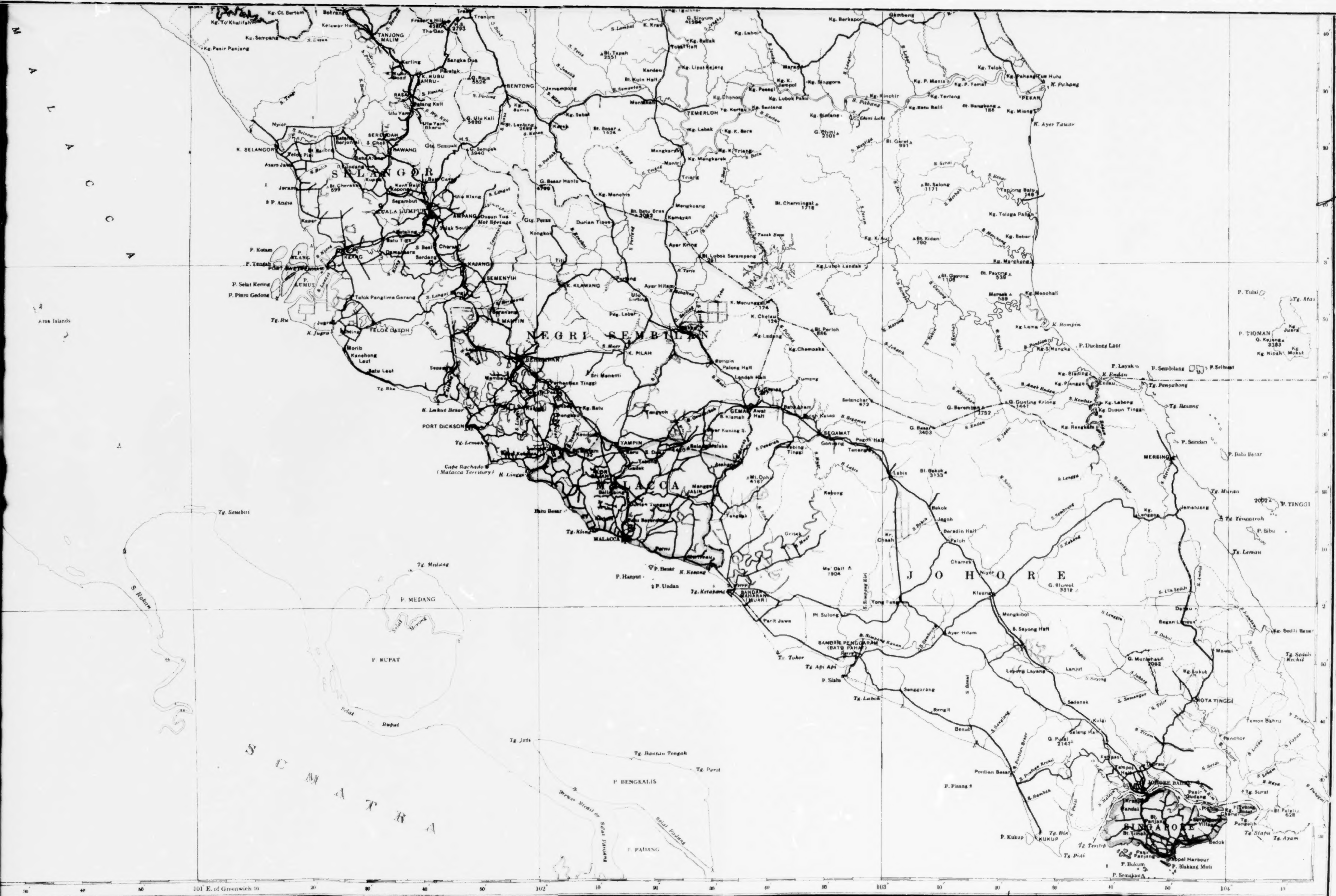

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CHAPTER I.

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The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,980 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom".

By an Act of Parliament which received the Royal Assent on the 16th November, 1934, the territory of the Dindings was restored to Perak and has formed part of the State since the middle of February, 1935. The present Ruler of the State is His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., ibni Al Marhum Al Sultan Idris.

SELANGOR.

Selangor (3,160 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,580 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in **1641** A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungei Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungei Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Tuanku Abdulrahman, K.C.M.G., ibni Al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 13,820 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, K.C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15°F. at coastal stations and between 15° and 20°F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December, followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 235 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 110 inches and Cameron Highlands 107 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 53°F. and at Tanah Rata 42°F. or only 10°F. above freezing.

CHAPTER II.

Government.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

The State Council of Negri Sembilan comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undang, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undang for amendment or confirmation, and assent is finally given by His Highness and the Undang. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer to be styled Resident-General (a title which has since been altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected. In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State. The Federal Council, which was reconstituted in 1927, consisted in 1935 of the High Commissioner for the Malay States (an appointment held ex officio by the Governor of the Straits Settlements) as President; the Chief Secretary to Government, Federated Malay States; the four British Residents; the Legal Adviser; the Financial Adviser; the Adviser on Medical Services; the Controller of Labour; the General Manager for Railways; the Adviser on Education; the Commissioner of Customs and

Excise; the Secretary for Chinese Affairs; the Adviser on Agriculture; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. Certain laws relating to departments, which under the decentralisation policy have been transferred to State control, though affecting more than one State are however passed by the State Councils. The Federal Council retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 25 districts in each of which there is a Sanitary Board, a Licensing Board, and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The population of the Federated Malay States on the 30th June, 1935, was estimated to be 1,777,421, an increase of 145,693 on the figure for 1934. This estimate is based on the 1931 census, and is calculated by including the balance of births over deaths, and immigration over emigration and also the population of the Dindings which has been ceded to the State of Perak.

Immigration has had an important influence on the vital statistics for 1935. During the twelve months ending in June, 1935, the population has increased, by the balance of immigration over emigration, to the extent of over 100,000.

The population represents:

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.	Total.
Perak	297,875	327,866	164,147	2,650	6,680	799,218
Selangor	133,909	244,943	159,251	3,145	10,334	551,582
Negri Sembilan ...	93,954	92,149	49,857	933	3,263	240,156
Pahang	117,265	52,656	14,662	417	1,465	186,465
Total ...	643,003	717,614	387,917	7,145	21,742	1,777,421

During the second half of 1935 the number of immigrants decreased. The estimated population at the end of the year being 1,813,714, an increase of 36,293.

BIRTHS.

There were 63,721 births registered during the year, an increase of 6,024 or 10.4 per cent. over last year.

The birth-rate was 35.9 per mille compared with 35.4 in 1934. More than 60 per cent. of the increase in the number of births was due to the Chinese. The birth-rate for Chinese increased in every State, due to the increasing proportion of women of this race. Births of Chinese race now exceed those of Malays in the Federated Malay States.

Of the total births, 33,286 were males and 30,435 females, giving a birth sex ratio of 109 males to 100 females: the ratio for 1934 was 110 males to 100 females.

DEATHS.

Thirty-five thousand three hundred and sixty-seven deaths were recorded in 1935, compared with 34,985 in 1934, an increase of 382 or 1.1 per cent. over last year.

The crude death-rate was 19.9 per mille compared with 21.4 per mille in 1934, and 20.2 per mille in 1933.

The increase in birth-rate and decrease in death-rate were due to two factors, influx of adult population and improvement in public health. It is not possible to estimate accurately the effect of each factor.

The death-rate for Malays was 21.0 per mille as compared with 23.7 per mille for 1934, and again proved to be highest in Perak and lowest in Selangor.

In spite of the general improvement in health there was an apparent deterioration in health of all races in Pahang, and of Indians and Chinese in Negri Sembilan, but this may be partly due to defects in the method of estimating the distribution of population to States.

The Registrar-General draws attention to the high maternal mortality rate which was 9.5 per 1,000 births. The maternal mortality rate in England is less than half of this, and yet it is considered to be a cause for grave anxiety. The sex distribution of mortality in the age groups indicates that there is a heavy maternal mortality amongst Indians; that it is less, but still serious amongst Malays, and least amongst Chinese.

INFANT MORTALITY.

After an alarming rise last year, infant mortality rate declined to 144 per mille, a rate slightly lower than that for 1933 and much lower than last year's rate which was 163. The improvement was most noticeable amongst Malays in Perak, who in 1934 showed the greatest increase. The infant mortality for Perak Malays dropped from 192 to 144 per mille, and the rate for Perak as a whole from 168 to 138 per mille.

The lowest rate in 1935 was amongst Chinese in Perak—128 per mille and the next amongst Malays in Selangor—131 per mille. There was no evident explanation of this improvement. One would like to claim it as a result of improvements in sanitation, and in the care of infants, but there is no real justification for such a claim, for although it coincided with improvement in economic conditions, these conditions were improving during 1934 when the infant mortality rate increased. A possible explanation is that the shortage of labour last year led to the employment of mothers. Labour conditions are now more stable, as shown by the decrease in immigration.

A comparison of the infant mortality rates of the five large towns in the Federated Malay States offers an index of health conditions which is derived from known and reliable data.

INFANT DEATHS PER MILLE.

	1935.	1934.	1933
Kuala Lumpur ...	133	147	146
Ipoh	96	95	98
Taiping	161	186	151
Seremban ...	158	177	170
Kuala Lipis ...	187	139	129

It is difficult to offer any explanation of the disparity between the figures for these towns in all of which Infant Welfare Centres are functioning.

TABLE I.

BIRTH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1924-1935*, PER MILLE.

Year.	Malay.	Chinese.	Indian.	All races.
1924	37.1	21.1	21.9	27.3
1925	36.1	23.3	23.5	28.1
1927	35.9	30.7	23.5	30.5
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	31.9	35.0	34.0
1933	39.3	33.1	34.6	35.5
1934	37.8	35.1	33.2	45.4
1935	37.5	37.4	32.1	35.9

TABLE II.

SUMMARY OF BIRTH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1935.

State.	Malay.	Chinese.	Indian.	Non-Asiatic.	Others.	All races.
Perak	38.3	34.8	30.0	11.7	15.9	34.9
Selangor	37.0	40.5	33.7	19.4	9.4	37.0
Negri Sembilan ...	36.9	36.7	33.4	7.5	8.0	35.6
Pahang	36.3	41.2	32.9	4.8	1.4	37.1
F.M.S. ...	37.5	37.4	32.1	14.1	10.6	35.9

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* The records of the vital statistics for Pahang for 1926 were lost in the great flood.

TABLE III.

DEATH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1924-1935*, PER MILLE.

Year.	Malay.	Chinese.	Indian.	All races.
1924 ...	24.2 ...	23.3 ...	21.0 ...	23.2
1925 ...	22.6 ...	23.9 ...	22.8 ...	22.9
1927 ...	26.4 ...	34.1 ...	32.9 ...	30.7
1928 ...	24.4 ...	30.6 ...	30.2 ...	28.0
1929 ...	21.8 ...	29.6 ...	23.4 ...	24.6
1930 ...	20.4 ...	30.4 ...	21.8 ...	24.1
1931 ...	18.8 ...	18.9 ...	20.5 ...	19.1
1932 ...	19.1 ...	18.3 ...	18.9 ...	18.5
1933 ...	22.0 ...	19.3 ...	19.7 ...	20.2
1934 ...	23.7 ...	20.9 ...	19.7 ...	21.4
1935 ...	21.0 ...	19.8 ...	19.5 ...	19.9

TABLE IV.

SUMMARY OF DEATH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1935.

State.	Malay.	Chinese.	Indian.	All races.
Perak	21.5 ...	19.5 ...	19.4 ...	20.1
Selangor ...	18.0 ...	19.6 ...	18.0 ...	18.4
Negri Sembilan	20.3 ...	19.3 ...	21.2 ...	20.0
Pahang ...	23.7 ...	23.1 ...	27.3 ...	23.6
F.M.S. ...	21.0 ...	19.8 ...	19.5 ...	19.9

TABLE V.

SUMMARY OF DEATHS FROM ALL CAUSES AT DIFFERENT AGES IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1935.

State.	AGE GROUPS.								Grand total.
	Under 1 year.	1-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	
Perak	3,842	2,191	856	659	1,268	1,547	1,521	4,164	16,048
Selangor	2,853	1,461	420	388	894	972	916	2,225	10,129
Negri Sembilan ...	1,305	623	218	197	430	521	517	983	4,794
Pahang	1,190	770	240	160	314	397	416	909	4,396
Total ...	9,190	5,045	1,734	1,404	2,906	3,437	3,370	8,281	35,367

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

TABLE VI.

SUMMARY OF INFANT MORTALITY RATES IN THE FEDERATED MALAY STATES ACCORDING TO STATES AND RACES FOR THE YEAR 1935, PER THOUSAND BIRTHS.

State.	Malay.	Chinese.	Indian.
Perak	144	128	150
Selangor	131	143	145
Negri Sembilan	144	161	154
Pahang	178	148	234
Average rate	147	139	152

TABLE VII.

INFANT MORTALITY RATES. ALL NATIONALITIES, 1935.

State.	Infant deaths.	Births.	Infant mortality rates.
Perak	3,842	27,867	138
Selangor	2,853	20,391	140
Negri Sembilan	1,305	8,547	153
Pahang	1,190	6,916	172
F.M.S.	9,190	63,721	144

TABLE VIII.

SUMMARY OF INFANT MORTALITY RATES (ALL STATES AND ALL RACES) IN THE FEDERATED MALAY STATES FOR THE PERIOD 1925-1935.*

Year.	Infant mortality rate per mile.
1925	177
1927	203
1928	182
1929	178
1930	163
1921	139
1932	137
1933	146
1934	163
1935	144

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* The records of the vital statistics for the State of Pahang for the year 1926 were lost in the great flood.

CHAPTER IV.

Health.

The general health of the people remained satisfactory during the year, in spite of an increase in the incidence of malaria.

There was an increase of admissions to Government hospitals during the year after a steady decrease since 1932, as shown below:

1932	85,978
1933	76,297
1934	75,916
1935	92,276

The rise to some extent is caused by the increase in population due to immigration, and to the transfer of the Dindings from the Colony to the State of Perak.

If the infant mortality rate may be regarded as a sensitive index of general health conditions then the general health may be considered satisfactory as the sudden rise in the infant mortality rate last year from 146 per mille in 1933 to 163 per mille declined to 144 per mille.

SUMMARY OF PRINCIPAL CAUSES OF DEATHS IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1935.

State.	Causes of Deaths.												
	Malaria fever definitely diagnosed.	Enteric fever.	Dysentery.	Small-pox.	Diphtheria.	Cholera.	Plague.	Cerebro-spinal fever.	Tetanus.	Tropical typhus.	Influenza.	Probable malaria and fever unspecified.	Tuberculosis of respiratory system.
Perak ...	411	23	157	...	30	...	...	...	109	14	13	6,579	541
Selangor ...	215	16	206	1	40	...	...	...	27	4	17	2,648	418
N. Sembilan ...	258	5	83	...	1	...	...	...	8	3	6	1,547	218
Pahang ...	139	11	28	...	3	...	...	...	11	4	13	1,917	155
Total ...	1,023	55	474	1	74	...	...	...	155	25	49	12,691	1,332

State.	Causes of Deaths.											
	Other forms of tuberculosis.	Syphilis.	Ankylostomiasis.	Cancer.	Beri-beri.	Diseases of the heart.	Other diseases of circulatory system.	Bronchitis.	Pneumonia (all forms).	Other diseases of respiratory system.	Diarrhoea and enteritis.	Other diseases of digestive system.
Perak	52	39	32	116	45	270	34	171	863	164	329	391
Selangor ...	41	48	29	66	138	245	46	327	763	47	568	221
N. Sembilan ...	10	14	2	25	64	121	15	177	395	14	213	53
Pahang ...	6	7	37	13	75	28	15	13	198	171	81	109
Total ...	109	108	100	220	322	664	110	688	2,219	396	1,191	774

State.	Causes of Deaths.									
	Convulsions.	Diseases of nervous system and sense organs.	Non-venereal diseases of genito-urinary system.	Diseases of pregnancy, child-birth and puerperal state.	Premature birth and diseases of early infancy.	Old age or senility.	Violence (all forms).	Leprosy.	Other causes.	Total.
Perak	2,016	140	167	258	412	1,082	311	3	1,276	16,048
Selangor ...	1,551	109	146	199	473	857	255	8	400	10,129
N. Sembilan ...	658	33	61	81	202	254	131	1	141	4,794
Pahang ...	422	22	123	71	182	212	89	...	241	4,396
Total ...	4,647	304	497	609	1,269	2,405	786	12	2,058	35,367

PREVAILING DISEASES.

Malaria.—There was an increase in the number of recorded cases of malaria in all the States. The total number of cases admitted to Government hospitals during the year was 21,975, compared with 15,786 cases in 1934 and 17,130 cases in 1933. The increase was greatest in Negri Sembilan where nearly two thousand more patients were admitted than during last year. All cases of malaria admitted to hospital are accurately diagnosed and the number of such cases may therefore be regarded as a reliable index of the disease.

To some extent the increase is due to the influx of labourers to estates, but it is proportionately greater in the sections of the population not employed on estates. It is a tribute to the value of preventive work on estates that in spite of the general tendency towards an increase in malaria and the added risk caused by an influx of a large number of new labourers, there has been so little deterioration of health amongst estate labourers.

The increase in malaria is not alarming, and the relatively small increase in deaths from this disease indicates that it is being kept under control. But it is clear that anti-malaria work must be not only maintained but intensified if this tendency towards a rise in the incidence of malaria is to be checked. Anti-malaria work was extended during the year and the distribution of quinine through the agency of schools, village headmen and departmental staff was carried out on a larger scale.

Dysentery, Diarrhoea and Enteritis.—This group was responsible for 1,665 deaths or 4.7 per cent. of total deaths. In 1934 and 1933 the percentages were 4.0 and 3.7 respectively.

Pneumonia.—This condition was again responsible for the greatest number of deaths due to diseases of the respiratory system and accounted for 2,219 deaths or 6.2 per cent. of the total number of deaths. This rate shows an increase over the last two years, the figures being 1,793 deaths in 1934 and 1,566 in 1933.

Tuberculosis.—Tuberculosis in various forms was responsible for 1,441 deaths, of which 109 were due to non-pulmonary type, giving a percentage of 4.0 of the total deaths, compared with 1,394 deaths in 1934 and 1,409 in 1933.

The problem of how best to combat pulmonary tuberculosis continues to engage the earnest attention of the Health and Medical Authorities. Every effort is made by educational means to bring home to the people the necessity of cleanliness and personal hygiene with a view to avoiding infection and preventing the spread of the disease.

Cases admitted to hospital are, as far as possible, reported to the Health Branch whose duty is to investigate and supervise them after discharge from hospital, but the greatest measure in combating the disease would appear to lie in better housing with improved education in sanitary measures.

The racial incidence indicates that as regards hospital in-patients this disease is most prevalent amongst the Chinese who, however, as in other diseases tend to be admitted only when the disease is far advanced and they can no longer work.

Leprosy.—Sungei Buloh Settlement.—There were 1,320 patients at the beginning of the year, as compared with 1,104 at the beginning of 1934. The number increased to 1,593 at the end of the year. The total number treated in the settlement during the year amounted to 1,841.

There has been a disappointing decline in the number of patients discharged as bacteriologically negative and free from signs of active lesions. The number is 51 compared with 163 last year. The most important factor in the reduction in discharges is that it has been found necessary to retain at Sungei Buloh "burnt out" cases of leprosy, who are no longer infective, but who are marked with the scars and crippled with the deformities of the disease. In former years such cases were transferred to decrepit hospitals or set at liberty; most of them cannot earn a living and have no relatives who are willing to maintain them, so they have to remain at Sungei Buloh, swelling the residue of cases who do not benefit from curative treatment. Another factor is the raising of the standard of fitness for discharge; every patient who is discharged now must have remained bacteriologically free from leprosy for at least six months, and must also satisfy the examiners that he is likely to be able to support himself or has relatives who will accept him. During the year 30 patients were re-admitted who had been discharged during the previous four years, and had relapsed.

The return of these relapsed cases, and the raising of the standard for discharge have tended to depress the spirit of optimism that prevailed in the settlement, but the morale of most of the patients is still very good. There has been an increase, however, in the number of patients who have left without permission. During the year there were 202 absconders. Some of these merely took leave in order to have a holiday or to attend to their private affairs, and 72 of them came back in the course of the year. A large proportion of the others were early cases or patients who were almost cured, and who were too impatient to wait for official discharge. In spite of discharges and abscondings, the number of patients continues to increase. The number of new admissions in the year, viz., 443, indicates how serious the leper problem is.

Leper Asylum, Kuala Lumpur.—This contains a diminishing number of chronic incurable lepers who are opium smokers. No additions have been made to their number since 1931. The population was 268 at the beginning of the year and 219 at the end of 1935.

Venereal Diseases.—The number of patients for venereal diseases in Government hospitals and clinics is still declining. The total number of cases of venereal disease treated in the Federated Malay States in each of the last seven years was :

Year.	Total cases treated.
1929	40,802
1930	35,734
1931	31,817
1932	25,207
1933	23,176
1934	19,704
1935	18,589

It might have been expected that the increase in immigrant population, and the improvement in economic conditions would have caused an increase in venereal diseases. That the contrary is true seems to indicate that the work done during recent years in the way of education, legislation and treatment is producing good results.

HOSPITALS AND OTHER MEDICAL INSTITUTIONS.

The following table shows the average daily number of patients in the hospitals of each State, the total number of patients admitted during the year, the total number of deaths, and the death-rate for the years 1934 and 1935.

State.	Average daily No. of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1934.	1935.	1934.	1935.	1934.	1935.	1934.	1935.
Perak	1,210	1,523	33,962	39,890	2,863	3,219	8.32	8.07
Selangor	880	982	20,642	23,992	1,640	1,886	7.94	7.86
Negri Sembilan ...	601	731	11,845	15,976	947	1,100	7.99	6.88
Pahang	382	462	9,467	12,418	580	753	6.12	6.0
Total ...	3,073	3,698	75,916	92,276	6,030	6,958	7.94	7.20

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries), apart from those treated at special institutions such as infant welfare centres, venereal disease clinics, etc., was 653,430, the corresponding figure for 1934 was 607,643.

INFANT WELFARE CENTRES.

The work at the Infant Welfare Centres and clinics continued successfully. The total number of attendances at the various clinics numbered 179,089. The three centres started in

Pahang in 1934 at Kuala Lipis, Kuantan and Pekan, have become popular. It is proposed to establish special centres in East Pahang in 1936. The centres are in charge of a Lady Medical Officer or a Sister assisted by a staff of Asiatic nurses.

The educational side of the centres continued to be of primary importance and every effort was made to continue lectures and practical demonstrations.

Ante-natal work is being carried out on an increased scale, and includes physical and laboratory examination as well as arrangements for dental treatment. The principal function of the clinics, however, is to teach mothers how to look after their children properly. The health visitors visit the homes of newly-born infants, and later encourage the mothers to come to the centres. Health visitors are well received everywhere. At all centres the majority of those who seek advice are Chinese.

CENTRAL MENTAL HOSPITAL.

The number of patients on the 31st December, 1935, was 2,620. The number resident on 1st January, 1935, was 2,550. The number of admissions from all sources totalled 963 compared with 881 for the previous year and 707 for the year 1933.

Males.		Females.		Total.
720	...	243	...	963

Eight hundred and sixty-six patients were admitted from the Federated Malay States and the remainder from the States of Kedah and Perlis.

The most frequent form of mental disorder was confusional insanity, of which there were 413 cases. Senile dementia accounted for 196 admissions, dementia praecox (primary dementia) for 101, melancholia for 54 and mania for 52 admissions.

Six hundred and seventy-seven patients were discharged during the year. Two hundred and eighty-two patients were discharged as recovered; a recovery rate of 29.1 per cent. This is lower than the recovery rates for 1934 and 1933 which were 32.69 per cent. and 42.15 per cent. respectively. The proportion of those discharged as relieved is, however, correspondingly increased. Of those discharged as recovered, 209 were diagnosed as confusional insanity.

One hundred and eighty-six patients died during the year. This is four less than in the previous year and gives a death-rate of 5.29 per cent. on the total treated.

The general health of the patients was good throughout the year. There was an increase in the number of cases of malaria; 168 cases were treated as compared with 101 in 1934.

The farms continued to be productive and the hospital is self-supporting as regards fruit, vegetables and pork.

DECREPIT SETTLEMENTS.

Decrepit settlements are maintained in Taiping, Kampar, Kuala Lumpur, Serendah, Kajang and Tampin. The total average daily number of inmates during the year was 588, of which 277 were accommodated in the decrepit settlements in Selangor. Inmates of these settlements who become ill are transferred to the hospital wards and are recorded along with the hospital patients.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment (Cap. 137). Towns and villages which consist of a score or so of houses, but which are not Sanitary Board areas proper, are generally brought under modified control by applying some of the provisions and by-laws under Part X of the Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank-floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

HOUSING OUTSIDE SANITARY BOARD AREAS.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part estate or mine managers and fairly well-to-do Asiatics, but their houses are as a rule of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Departmetnt. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Production.

MINERALS.

The year 1935 was noteworthy for the large releases of quota under the International Tin Control Scheme. The year started with an International quota of 40 per cent. of standard tonnages, and finished up with a quota of 80 per cent. Exports of tin-ore were calculated throughout the year on an assay value of 75.5 per cent. tin. The assay values of Malayan ores, from the inception of the Restriction Scheme, have been as follows:

March-December, 1931	75.1 per cent.
1932	75.38 ,,
1933	75.47 ,,
1934	75.39 ,,
1935	75.56 ,,

At the end of 1934 Malaya had an underproduction of 161 tons of tin for which due allowance was made when fixing the domestic quota for 1935. At the end of 1935 Malaya had overproduced, against the annual quota, by 55 tons leaving an underproduction balance of 106 tons. An adjustment will have to be made on account of assay value, but this requires the confirmation of the International Tin Committee. The following table gives a comparison between International and domestic quotas:

	International percentage.	F.M.S. domestic percentage.
1935—January-March	40	28.3
April-June	45	32.4
July-September	70	46.7
October-December	80	62

The domestic quota represents an amount of tin, which is available out of Malaya's standard tonnage of 71,940 tons, after making due allowance for exports of tin-ore from the Unfederated Malay States and Malacca, tin-ore from dulang washers, Sakai workings and confiscated ore. The amount then available for the domestic quota is expressed as a percentage of the total annual assessments of all mines producing tin-ore in the Federated Malay States. At present this total stands at 94,563 tons metal calculated at 75.5 per cent. tin-in-ore. The Unfederated Malay States and Malacca have standard tonnages amounting to 2,412 tons and flat rates amounting to 385 tons. The potential production of Malaya, therefore, on a domestic quota of 100 per cent. is nearly 100,000 tons per annum. Even this figure falls far short of what Malaya could produce with unrestricted output.

The buffer stock was finally disposed of in September, 1935.

TIN.

The methods of mining employed in the Federated Malay States, in order of their importance from an output point of view, are as follows:

> Dredging, gravel pumping, hydraulicing, lode mining and open cast mining. A certain amount of tin-ore is won by alluvial shafting or "Lombong Siam" and by dulang washers.

The exports of tin and tin-in-ore from the Federated Malay States for the last five years were as follows:

1931	53,457 tons
1932	28,363 ,,
1933	23,926 ,,
1934	36,385 ,,
1935	40,749 ,,

The following table gives the prices ruling during the last five years in dollars per pikul:

—	1931.	1932.	1933.	1934.	1935.
	$ c.	$ c.	$ c.	$ c.	$ c.
Highest	71 37½	81 75	124 00	121 00	116 25
Average	60 29	69 76	99 99	114 41	111 32
Lowest	50 37½	52 87½	71 75	110 62½	105 50
Fluctuation	21 00	28 87½	52 25	10 37½	10 75

TUNGSTEN ORES.

Scheelite is mined on a large scale at Kramat Pulai. This mine is considered one of the most important scheelite mines in the world to-day. Scheelite is a tungstate of calcium. The outputs of scheelite for the last five years, 99 per cent. of which comes from Kramat Pulai, were as follows:

1931	333 tons
1932	30[illegible] ,,
1933	918 ,,
1934	1,508 ,,
1935	1,365 ,,

Wolfram, an iron and manganese tungstate, is mined on a small scale in Perak, Selangor and Negri Sembilan. The outputs for the last five years were as follows:

1931	Nil
1932	Nil
1933	33 tons
1934	28½ ,,
1935	8 ,,

Tungsten is one of the most valuable of the steel-hardening metals. Tungsten steel is very tough and possesses the valuable property of retaining its temper at a great heat. It is used in the manufacture of high speed tools, in making filaments for electric glow lamps, and is useful as a substitute for platinum in the manufacture of contact points.

GOLD.

Gold is only mined on an extensive scale in the Raub Australian Gold Mining Company's concession. The deposit occurs in the calcareous rocks of the Raub series and has been exploited to below 1,200 feet. There has been considerable activity recently in the mining of alluvial gold when it occurs conjointly with tin. The following table shows the output of gold for the last five years:

	Lode.	Alluvial.	Total.
	OUNCES.	OUNCES.	OUNCES.
1931	24,728	5,734	30,462
1932	27,755	1,541	29,296
1933	26,358	2,678	29,036
1934	24,310	5,911	30,221
1935	22,909	6,862	29,771

Method of Extracting Gold on Gravel Pump Mines in Batang Padang District.—The majority of the gold mines in the Batang Padang district being producers of tin-ore as well as gold, the method adopted for the extraction of a concentrate is, in the earlier stages, exactly similar to that employed on gravel-pump mines working for tin only, that is by the use of monitors, gravel-pump and palong (sluice). The nature of the bedrock, which is soft, usually phyllite or black schist, renders it necessary to clean up the bottom of the mine, as much of the gold is held in the parit (ditch) and does not reach the gravel pump. This cleaning up is done by Chinese women with dulangs, and the tin-gold concentrate thus obtained is added to that won from the palong. After the tin-gold concentrate has been removed from the palong, there is a further brushing of interstices, etc., to recover any gold which may be left. The cleaning up of the palong is done at varying intervals, on different mines, of from 5 to 10 days. In addition, once a month, the feeder palong, which is paved with wood blocks, is cleaned up and a concentrate consisting chiefly of gold obtained therefrom. In the dressing-shed the tin-gold concentrate is treated on a 30 mesh screen. The oversize is washed on a very shallow dulang, and the coarse gold separated from the tin. The through size is also washed in the same way. The tin concentrate thus obtained is placed in tubs and mercury added. It is then mixed thoroughly and again washed in a flat dulang, the amalgam being separated from the tin. The amalgam is squeezed in a cloth and most of the mercury recovered. The remaining amalgam is then roasted, no retort being used, and any mercury remaining is vapourised and lost. The product obtained is sold in the form of dust either direct to gold buyers or to Ban Hin Gold Mines Ltd., who do their own smelting. The usual fineness of the gold dust thus won is about 820, and the gold smelted by Ban Hin Gold Mines Ltd. about 935.

COAL.

The only coal mine in the Federated Malay States is at Batu Arang in Selangor, 25 miles from Kuala Lumpur. The coal has a pitch-black colour and breaks with a conchoidal fracture. It is fairly hard, and has a specific gravity of 1.2 to 1.3. Mining started in 1913 and up to date 6,888,489 tons have been removed. Of the very large tonnage of reserves, some 10,000,000 are developed and readily available for extraction.

China Clay or Kaolin is worked on a small scale in Perak. The following are the outputs for the last three years:

1933.		1934.		1935.
153 tons	...	164 tons	...	91 tons

It is used as a filler in paper and fabric manufacture and is used locally as a filler in rubber goods.

Galena, a sulphide of lead, is being mined in Pahang. The deposit occurs in a schist-limestone contact zone. Development work is now proceeding and it is hoped to prove an extensive deposit. Thirty-three tons were exported in 1935.

Fluor Spar or Fluorite, a compound of calcium and fluorine, occurs at Kramat Pulai where, it is estimated, there is a stock of 25,000 tons. A few tons have been exported as samples and it is possible that arrangements will be made to export the whole quantity available. This mineral is used in the manufacture of steel by the open-hearth process, in the manufacture of hydrofluoric acid, glass and cement.

AGRICULTURE.

Agriculture and mining continued to be the two mainstays of the Federated Malay States. Crops are grown on properties ranging in size from small holdings of between one half and ten acres to large estates varying in extent from 100 to several thousand acres.

Certain crops are grown on both estates and on small holdings. These include the major permanent crops, rubber and coconuts, together with coffee, bananas, pineapples, tapioca and gambier, each of which may be grown as a catch crop with one of the major crops or may itself form the main crop; they also include tea which, however, occupies only a small area in Malaya. One crop, the oil palm, is only grown on large properties. Other crops again are cultivated exclusively on small holdings by Asiatics. These comprise the important rice crop, minor food crops, such as maize, groundnuts, arecanuts, fruit, vegetables and tobacco.

A.—CROPS GROWN ON LARGE ESTATES AND ON SMALL HOLDINGS.

Rubber.—The total area under rubber in the Federated Malay States at the end of 1935 was estimated to be 1,579,760 acres, made up as follows:

	1	2	3	4
—	Estates of over 100 acres and over.	Holdings of less than 100 acres.	Total.	Increase or decrease compared with 1934.
Perak	309,845	244,304	554,149	+ 1,109
Selangor ...	354,426	133,295	487,721	—32,629
Negri Sembilan	285,501	86,274	371,775	+ 7,392
Pahang... ...	90,228	75,887	166,115	— 1,127
	1,040,000	539,760	1,579,760	—25,255

The immature area on estates amounted to 96,235 acres, that on small holdings is not known.

The area of budded rubber amounted to 106,313 acres as compared with 103,362 acres in 1934; it was divided among 387 estates.

Production and Consumption.—The production of rubber during the past three years is shown below:

PRODUCTION OF RUBBER IN THE FEDERATED MALAY STATES, 1933-1935. (IN TONS.)

State.	By estates of 100 acres and over.			By small holdings of less than 100 acres.			Total.		
	1933.	1934.	1935.	1933.	1934.	1935.	1933.	1934.	1935.
Perak	44,320	46,612	41,917	110,848	104,141	67,380	248,211	251,558	200,447
Selangor ...	51,239	55,754	47,235						
N. Sembilan ...	36,918	37,973	35,885						
Pahang ..	4,886	7,078	8,030						
Total ...	137,363	147,417	133,067	110,848	104,141	67,380	248,211	251,558	200,447

Local consumption of rubber remained at a negligible figure, so that practically the whole production was exported. The majority of the crop continued to be produced in the form of standard smoked sheet, but appreciable quantities of rubber were again exported in the form of latex; the total quantity exported from Malaya in this form during the year was estimated to amount to 13,150 tons on the basis of dry rubber content.

RUBBER REGULATION.

The International Rubber Regulation Agreement continued to function during the year.

Under the Agreement Malaya received a quota of 7/12ths of 504,000 tons in 1934 and a quota of 538,000 tons in 1935. The share of Malaya's quota allotted to the Federated Malay States by the Controller of Rubber for 1934 was 7/12ths of 268,950 tons and for 1935 was 286,850 tons, subsequently reduced to 283,560 tons, giving a permissible export of 136,716 tons for the last seven months of 1934 and of 191,403 tons for 1935 as compared with an export of 248,356 tons in 1933.

The method of control adopted was an assessment of the productive capacity of individual rubber holdings and the granting of export rights on the basis of this assessment. Comparatively few assessments were completed by the 1st January, 1935, and the export rights given in 1934 were provisional only. By July, 1935, assessment was practically complete both for large and small holdings. In the case of large holdings owners were credited with their export rights in the ledgers of the Controller and in the case of small holdings owners received coupons permitting the export of 5, 10 or 25 katis or 1 or 5 piculs of dry rubber. These rights or coupons are used to cover either direct exports or sales to rubber dealers who are in their turn permitted to export rubber to the extent of the export rights so acquired by them. Export rights and coupons issued to owners of holdings not made use of for the purpose of export or sale are cancelled at the end of each quarter. A steady export of rubber throughout the year is thus assured.

Under the International Agreement the planting of rubber on land which was not under rubber on the 1st June, 1934, is prohibited except that a limited area may, with the approval of the Controller, be planted for experimental purposes. The total area so approved up to the 31st December, 1935, in the Federated Malay States was 788 acres.

The replanting of areas under rubber on the 1st June, 1934, is allowed to the extent of 10 per cent. of any holding in any one year and 20 per cent. during the regulation period. The area approved for replanting up to the end of 1935 in the Federated Malay States was 7,258 acres.

The restriction scheme operated smoothly and well throughout the year and no special difficulties were encountered.

Conditions on Estates and Small Holdings.—Notwithstanding the relatively low percentage of the quota allowed for export, practically all estates have been able to produce rubber at a profit; cultivation and manufacturing conditions have undergone further improvement although labour and salary rates have risen appreciably.

Under the International Rubber Regulation Agreement planting of new areas is prohibited; in consequence no new areas were planted with rubber during 1935. Increasing attention was however paid on estates to the necessity for replanting certain of the older areas which, under the influence of age usually associated with root disease, have shown a tendency to declining yields of recent years and in accordance with the conditions of the International Agreement 2,276 acres were cut out and replanted during the year. Replantings were made almost exclusively in either high-yielding budded material or in plants raised from clonal seeds derived from high-yielding material.

The area out of tapping on estates amounted to about 242,578 acres at the end of the year. Surveys of the area of small holdings out of tapping were made during the year and indicated that there was a steady increase in the number of holdings untapped. At the end of March it was estimated that 17 per cent. of the total area was untapped; in June it had increased to 27 per cent., in September it was 27.2 per cent. and in December 38 per cent. The principal reason for this is the relatively high prices which have prevailed for export coupons as compared with rubber. In consequence a steadily increasing number of small holders have preferred to sell their export rights in the shape of coupons rather than to tap their trees and sell rubber with coupons attached.

It is anticipated that this reduction in tapping will have a beneficial effect by providing a resting period which will favour bark renewal.

The higher prices prevailing for rubber coupled with the pressure exercised by the officers administering the coupon issue in connection with rubber regulation, resulted in the maintenance of a fairly high level of upkeep of small holdings throughout the Federated Malay States.

Diseases.—Diseases and pests were, on the whole, less in evidence this year than usual; towards the end of the year, with the advent of the wet weather, the incidence of mouldy rot appreciably increased, but not to a serious extent; it is satisfactory to record that, as a result of the methods of persuasion and demonstration that have been adopted of late years in the control of diseases on small holdings, conditions in this respect have materially improved.

Leaf mildew due to *Oidium Heveae* appeared in Selangor, Negri Sembilan and Perak, on the young foliage after wintering. On the whole, however, the disease did no serious damage and was less in evidence than in the previous year. Sulphur dusting with a view to controlling the disease was again undertaken on several estates, more especially in Negri Sembilan.

Further additions were made to the staff of Asiatic Rubber Instructors appointed by the Rubber Research Institute of Malaya, who are placed, for purposes of supervision, under the control of Agricultural Officers of the Field Branch of the Department of Agriculture. The results of the work of these officers are already becoming apparent in various directions. The introduction of a small smoke-house which can be readily constructed by small holders at very little cost merits mention. By the end of the year a number of these had been erected on small holdings in various parts of the Federated Malay States; one of their effects is to help in the production of rubber of low moisture content. The Instructors have continued their demonstrations and lectures on the correct maintenance of small holdings, disease control, tapping systems and preparation of good quality sheets, and reports indicate that in consequence the general standard of small holders' rubber shows steady improvement.

Coconuts and Coconut Products.—Coconuts are grown both as an estate crop and also on numerous small holdings throughout the Federated Malay States. Coconut estates are confined to the Bagan Datoh district of Lower Perak and the coastal area of the district of Krian in the State of Perak and to the coastal areas of the districts of Kuala Selangor and Kuala Langat in the State of Selangor. The estimated acreages under cultivation in the crop are shown below:

	Areas grown on estates of over 100 acres.	Areas grown on small holdings less than 100 acres.	Total.
Perak	52,345	63,811	116,156*
Selangor ...	37,590	72,622	110,212
Negri Sembilan	1,069	4,920	5,989
Pahang	2,842	14,446	17,288
Total ...	93,846	155,799	249,645

On small holdings considerable quantities of copra are manufactured in the coastal districts of the States of Perak and Selangor and on a small scale on the East Coast of Pahang. There is also a considerable trade in fresh nuts from small holdings on coastal areas to inland districts where local supplies are deficient. There is a further considerable production of coconut oil by Malay small holders from fresh nuts which is sold for local consumption, while in addition there is a large direct consumption of coconuts by the small holders themselves.

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* The area in Perak shows an increase of 6,892 acres as compared with the area in 1934. This is due to the transfer of the Dindings from the Straits Settlements to the Federated Malay States.

The total annual consumption of coconuts in Malaya is considerable, though nothing like so high as that which obtains in Ceylon. It is estimated to be 100 nuts per head of the whole population per annum, while it can be safely assumed that, in the coconut growing areas, consumption of coconuts amounts to one nut per head of population per day.

Very little use is made of the by-products of the coconut industry in Malaya; the production of coconut coir as a small-holders' industry is practically non-existent, neither is coconut charcoal made to any extent, although in certain of the prisons of the Convict Establishment a certain amount of coir is produced by prison labour. This is in striking contrast to conditions on the Malabar Coast of India, for example.

Local prices for coconut products improved considerably during the year. The average price in Singapore for "Sundried" copra was $4.53 per pikul as compared with $2.94 per pikul in 1934 and $3.89 per pikul in 1933. The corresponding price for mixed copra was $4.15 per pikul as compared with $2.44 per pikul in 1933. The market for "Sundried" opened at $4.15 in January and rose to $4.60 in February, thereafter it steadily declined until in August it reached $3.84. Subsequently prices recovered and in December averaged $5.46 per pikul for "Sundried" quality. The local prices in the Federated Malay States were in most localities some 50-60 cents below those in Singapore, the difference representing transport and handling charges.

An increasing proportion of the copra production of small-holdings is coverted into oil and cake within the Peninsula for local consumption and for export. The nett quantity of oil exported from Malaya shows a further increase from 25,485 tons in 1934 to 35,911 tons in 1935.

As a result of the marked rise in price for copra which occurred, conditions both on estates and on small-holdings considerably improved, and practically on all properties profitable production once more supervened. As in the case of the rubber industry, this has led to a marked improvement in the standard of cultivation.

Copra produced by estates in the Federated Malay States has always borne a reasonably good reputation but that produced by small-holders was for many years of low quality and showed a tendency to deteriorate. Since 1929 research work, designed with the object of improving the quality of Malayan copra, has been in progress, and with it has been coupled active propaganda for the dissemination of information among small-holders. Results have been seen in a marked improvement in the quality of Malayan copra both on estates and particularly on small-holdings in Perak, Selangor and Pahang. Further additions were made to the number of kilns of approved type on small-holdings during the year, while in the latter part of the year a new type of small copra kiln of cheap construction suitable for small-holders was designed by the Officer-in-charge of Copra Investigation. Efforts are now being made to popularise this kiln amongst small-holders.

Courses of training in the preparation of good quality copra were again given at the Experiment Station at Klang to students of the School of Agriculture, to Agricultural Officers from various States and to Penghulus and Headmen from various parts of the country.

Further effect was given to a number of recommendations of the Vegetable Oils Committee of 1934. Among these may be mentioned the organisation of a special section of the Annual Malayan Exhibition at Kuala Lumpur dealing with coconuts and coconut products. The section was designed with a view to encouraging the production of high grade coconut products and also with a view to giving an idea of the possible range of production covered by the coconut industry and the opportunities existing for developing the uses of new products.

With the rise in prices the industry has considerably rehabilitated itself but, even at the present time, the range of prices for coconut products which is being experienced is little more than half that which prevailed in the pre-war period.

Pineapples.—The area under pineapples in the Federated Malay States at the end of 1935 was 9,525 acres. Of the total planted area, 7,349 acres were in Selangor, the only State in which the fruit is grown for export: in the other three States the fresh fruits are sold for local consumption.

Formerly pineapples were cultivated exclusively as a catch crop between young rubber and were employed as a means of cheapening the cost of bringing rubber into bearing. The industry, however, made such strides and the export trade in canned pineapples assumed such large dimensions, that, with the cessation of rubber planting, the conversion of pineapple growing to a main crop basis became a matter of importance. The transition is of a fundamental character and necessitates complete alteration in the methods of cultivation, if the lands on which the crop is grown are to be maintained in a satisfactory state of fertility.

Concurrently with this attention has been devoted to the improvement of manufacturing methods. Formerly conditions under which pineapples were canned left much to be desired; processes were crude and the factories were distinctly insanitary. Considerable progress has been made in bringing about improvements in this direction. Legislative powers to enforce these improvements are provided in Selangor by the Pineapple Industry Enactment of 1934, which requires the registration of pineapple factories and empowers the Registrar to refuse to register a factory if the sanitary conditions are not satisfactory in the view of the health authorities. It also provides for the marking of all tins and packages with a registered mark in order to enable consignments to be traced back to the factory of origin, for the introduction of grading and inspection and for the general regulation of the industry. Very great improvements have been made in consequence in the pineapple factory now operating in Selangor during the year. Towards the end of the year a second factory was in course of construction, but had not yet commenced operation.

Prices for pineapples have been fairly good throughout the year; they advanced subsequent to the inauguration of a Co-operative Selling Agency among packers in the middle of the year. The agency operates by fixing figures of production and allots a quota to each factory in the same ratio as it holds shares in the combine. The agency was registered for a period of six months and during that time was successful in raising prices of General Average Quality cubes from $2.35 to $4 a case.

The Pineapple Experiment Station at Lim Chu Kang, Singapore, which is supported by the three Governments of the Straits Settlements, Johore and the Federated Malay States continued operations during the year and further results have been obtained regarding the manurial and cultural requirements of the crop; considerable work was also carried out with a view to raising improved varieties of the Singapore canning pineapple by means of selection; in addition trials of other varieties of pineapples were continued.

A scheme to provide research and advice on the canning side of the industry by the appointment of a Canning Research Officer came into being during the year. The scheme in its present form is one of three years duration, and half of its cost is borne by a grant from the Colonial Development Fund, the remaining half being contributed by the three Administrations, the Straits Settlements, Johore and the Federated Malay States. An officer to fill the appointment was selected in September and during the remaining months of the year underwent special training at the Fruit and Vegetable Canning Research Station, Campden, Gloucester. It will be seen that the year has been characterised by further important developments in the pineapple canning industry which should help it to face the increasing competition in several directions of which there is evidence.

Coffee.—Coffee is grown both on estates and small holdings either as a sole crop or else interplanted with other cultivations. In the Federated Malay States there are 11,779 acres under the crop, the most important centre of production being Selangor with 7,629 acres, the crop being grown by numerous Malay and Chinese small-holders particularly in the coastal district of Kuala Langat.

Malaya is a large consumer of coffee; the Asiatic population are confirmed coffee drinkers and no village is without its coffee shop. The whole of the local production is consumed in the country and in addition there are considerable imports. In 1935 the imports of the Federated Malay States amounted to 867,508 lbs. valued at $100,512; these are the largest on record and would appear to indicate that there is a considerable opening for increased production of this crop with a view to local consumption.

The Singapore market for coffee suffered a severe setback in prices which were by no means on a high level even during the previous year. The average prices for the different grades was as follows: Palembang $9.78 per pikul and Sourabaya $15.85 per pikul. The prices of locally produced coffee vary considerably in the Singapore market owing to the variation in quality, and indicate that there is considerable room for improvement both in the methods of harvesting and of preparation of the product for the market.

In the lowland districts the varieties of coffee cultivated are either of the Liberian or the Robusta type. In the Cameron Highlands area, trials have been in progress for some years with the cultivation of Arabian coffee and there are about 250 acres planted under the crop in this area. Considerable improvements in the appearance of the crop occurred in many places during the year and prospects for its cultivation appear to be rather better than was formerly thought to be the case. Seeds of the Jamaica Blue Mountain coffee were received by the Department of Agriculture during the year and distributed to five cultivators in the Ringlet area.

The coffee berry borer gave rise to certain amount of trouble in the lowland areas during the year, but on the whole was less in evidence than formerly. The coffee leaf disease, *Hamelia vestratrix*, appeared on Arabian coffee in Cameron Highlands but it has been found that spraying twice a year with Burgundy mixture will keep the disease in check.

Tea.—The area under tea in the Federated Malay States at the end of 1935 was 2,279 acres, representing an increase of 329 acres compared with the previous year. Of this total 1,020 acres were planted on upland estates mostly in Cameron Highlands, 1,259 acres on lowland estates on the plains in Selangor and Perak and on small holdings owned by Chinese in Selangor and Negri Sembilan. At the end of the year there were eight estates making black tea of which two in the uplands were selling their produce in London and four in the lowlands were supplying the local market. The retail price for this tea locally varied from 40-60 cents per lb. according to grade, although green tea of inferior quality made on small holdings was retailed at about half these figures.

The total production of tea is not known, but experiments at Serdang and Tanah Rata show that with moderate applications of fertilisers at least 900 lbs. of made tea per annum can be expected in the lowland areas, while during the year yields of 700 lbs. of made tea per acre per annum were obtained from bushes seven years old at the Experiment Station at Tanah Rata, Cameron Highlands; there are indications that in the Highlands where soil conditions and lie of the land are favourable, yields equal to those on the plains may be possible.

Three commercial consignments of tea from the Tanah Rata Experiment Station were shipped to London and one consignment to Colombo during the year. The average price obtained from the London market was 12.15*d*. while at Colombo the price was 51 rupee cents, which is equivalent to 8.46*d*.

One shipment of lowland tea was made to the London market from the Central Experiment Station, Serdang, the remainder of the produce being sold locally. The average price realised for the shipment to London was 11.88*d*. per lb., a figure little lower than the price obtained for Cameron Highlands tea.

Experiments on both cultivation and manuring of tea were continued at both the Government Experimental Stations.

Derris.—Increasing interest is being shown in the cultivation of derris (tuba root) for export. The crop is grown for use as an insecticide and finds considerable employment in the form of spray washes for the control of plant pests and as a constituent for cattle and sheep dips. The plant from which derris is prepared is a native of the Peninsula and its toxic properties have long been known to the Malay population among whom its use as a fish poison is traditional; its development as an article of commerce for the preparation of insecticide is, however, a matter of comparatively recent growth.

The area planted under this crop in the Federated Malay States at the end of 1935 was 1,715 acres, an increase of 1,000 acres as compared with 1934.

The dried root is sold on two different bases of its toxic content, namely, rotenone content to the American market and ether extract value for other markets. It has been shown that the toxic content of the root varies considerably according to the strain that is planted, and a variety has been found to occur in the Changi District of Singapore, of which the toxic content is exceptionally high and for cuttings of which there has been a very strong demand.

The average Singapore prices for derris were on the rotenone content basis $49.58 per pikul and on the ether extract basis $36.88 per pikul; the corresponding prices in 1934 were $37.42 and $38.75 respectively.

Extensive experimental work was carried out by the Department of Agriculture during the year on the investigation of the toxic content of various strains of derris and on the establishment of clones of high toxic value. Work was also performed on the separation of the various toxic constituents.

B.—CROPS GROWN ENTIRELY ON LARGE ESTATES.

Oil Palms.—The total area planted under oil palms at the end of 1935 in the Federated Malay States was as follows :

	Acres.
Perak	17,405
Selangor	13,600
Negri Sembilan	1,273
Pahang	797
Total	33,075

All of the produce was exported with the exception of small quantities of oil which were used for the manufacture of soap. Production of oil in the Federated Malay States amounted to 17,338 tons and of kernels 2,711 tons, representing increases of 4,373 tons of oil and 698 tons of kernels over returns of the previous year.

It is to be anticipated that the output of the industry will show considerable annual increases for some years to come as the more newly planted areas come into full bearing.

During the year prices of palm oil and palm kernels recovered very considerably from the low level obtaining in the previous year. For the year the average prices were as follows: Palm oil £19 19*s*. 8*d*. per ton and palm kernels £8 13*s*. 9*d*. per ton. There are now 18 oil palm factories operating in the Federated Malay States. Arrangements for the transport and shipment of palm oil in bulk continued to operate during the year, and at the present time the majority of the crop is shipped in this way, only a small proportion now being shipped in barrels.

A planting manual entitled "The Oil Palm in Malaya" written by officers of the Department of Agriculture and embodying the most recent information on estate practice and on the results of field and factory investigations was published early in the year by the Department of Agriculture.

Experimental work on manuring of the crop and on the breeding of improved varieties by hybridisation and selection was continued throughout the year.

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—Rice is planted on approximately 195,000 acres in the Federated Malay States. It is grown exclusively by Asiatics on small-holdings of average size of 2½ acres each. It has been estimated that a holding of this size will, under Malayan conditions, yield sufficient rice to support a family of six people and will leave some surplus available for sale.

The crop is cultivated both on coastal alluvial lands and also in the bottoms of shallow valleys which are the characteristic feature of the inland regions in many parts of Malaya. This gives rise to two alternative types of sawah (rice fields). On the one hand there are continuous stretches of rice such as are seen in the coastal areas of Krian and on the other hand a series of separate areas of sawah of varying size separated from one another by hills of varying heights and extending over considerable distances. This type of sawah is seen extensively in the inland districts of the four States.

Padi cultivation has existed in Malaya since very early times and there is no question that, where suitable soil conditions exist, Malaya possesses rice lands which compare favourably with those of any other part of the world. It is a striking fact that despite the much higher pecuniary returns that have at times been offered by other crops, especially during the years of high prices for rubber and coconuts, padi cultivation has persisted. There is little doubt that this persistence has been materially facilitated by the belief which exists in the minds of the Malays that if a country produces a substantial part of its own food supply, it is much less likely to be affected by fluctuations in the price of export staples. The truth of this view was demonstrated during the years of acute financial depression when, in those areas where rice production predominated, distress was far less acute than where peasants depended for their existence on the production of crops for sale and export.

The encouragement of rice cultivation had for long been sympathetically regarded by the Malayan Government, but in 1930, the need for more active steps to encourage the local production of rice received a measure of attention and a committee was appointed to make recommendations for the extension and improvement of the rice industry. As a result various measures have been undertaken, including particularly the establishment of a separate Irrigation Department, the provision of funds for the construction of works for the improvement of water control in padi fields, the extended provision of scientific services for the investigation and improvement of padi cultivation and for the instruction of the raiat.

In consequence padi production has risen markedly since 1931. At present the total outturn of rice for the whole Peninsula is in the region of 300,000 tons whereas in 1930 it amounted to only 150,000 tons, that is to say the production of rice has doubled itself in the space of five years.

Contrary to the custom which prevails in many rice-producing countries, the cultivation of one rice crop per annum is the standard practice throughout the Malay Peninsula, as opposed to the cultivation of two or more crops per annum which obtains in parts of India, China and the Netherlands Indies. Experimental work has been performed on the possibility of growing two rice crops per annum in Malaya, but the results so far obtained indicate that it is doubtful whether this practice will lead to increased returns which would be proportionate to the extra labour and expense involved.

Practically everywhere in Malaya the transplanting system of cultivation is practised, the grains being sown in seed beds and the plants transplanted into the fields when they are about six weeks old. The methods employed in raising seedlings vary in different parts of Malaya according to conditions; in some places dry nurseries are sown, in others wet nurseries are used. The preparation of land for planting is performed either by ploughs or by hand cultivation. In the former case buffaloes are extensively used, while in the latter the implements employed comprise the short-handled hoe, locally known as the *changkol*, and the *tajak*, a flail-like implement with a sharp cutting edge. *Tajak* cultivation is the simplest form employed; experiments have shown that higher yields are obtained under suitable conditions where cultivation by means of the plough or *changkol* is substituted for that by the *tajak*. Transplanting is carried out by means of an implement known locally as "kuku kambing" while the padi is reaped either by the sickle or by the hand knife known as the *Tuai* or *Pisau Menuai*.

The area planted with rice in the Federated Malay States in the season 1934-35 and the total yields are shown below :

State.	Wet.		Dry.		Total.	
	Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
Perak	89,770	29,347,000	3,220	315,000	92,990	29,662,000
Selangor ...	15,460	4,222,000	730	106,190	16,190	4,328,000
Negri Sembilan ..	33,550	10.553,000	230	17,000	33,780	10,570,000
Pahang	32,810	8,273,000	980	153,000	33,790	8,426,000
Total ...	171,590	52,395,000	5,160	591,000	176,750	52,986,000

The total area planted was approximately 19,000 acres less than in 1934, but the total crop harvested was once again a record, being equivalent to 75,694 tons of rice, as compared with 75,000 tons of rice which formed the record crop of the previous season.

This favourable result was entirely due to a further increased yield per acre from wet padi which gave an average of 304 gantangs per acre as compared with 282 gantangs per acre in 1934 and 251 gantangs per acre in 1933. The factors responsible for this further improvement were favourable weather, the extended use of high-yielding selected strains of padi, better control of irrigation water and more systematic methods of destruction of rats.

Early in the season weather conditions gave rise to considerable anxiety in several areas, paricularly in the riverine mukims of Perak. Replanting became necessary in several places and the Department of Agriculture rendered assistance by the distribution of seedlings. Despite these efforts considerable areas failed to reach maturity, the destruction in the riverine mukims of Perak amounting to 800 acres.

The price of rice appreciably increased during 1935. Production and stocks in rice-producing countries appear to have been normal and the increase is probably due less to the stock position than to the improved purchasing power of the consumer coupled possibly with increased handling charges.

During the latter part of the year the Abyssinian war caused a sharp rise in price; this higher level was, however, not maintained. The range of prices of padi was from 5 cents a gantang to 14 cents a gantang. The average price at the Government Rice Mill in Krian was $1.94 per pikul as compared with $1.43 per pikul in 1934.

Completed figures for the areas under rice for the season 1935-36 are not yet available, but there appear to be indications that there has been some decrease in the area planted. So far the weather conditions have been less favourable than in the preceding season and it seems likely that the crop will be somewhat lower than its immediate predecessors.

In Krian measures for the control of rats in the padi area have been maintained throughout the year and as a result rat damage to the crop has been negligible.

A small self-contained rice mill erected by the Government of Pahang to deal with the surplus stocks of padi in the Temerloh district of Pahang started operations during the year. The

Government of Perak also acquired a rice mill from former Chinese owners in Parit Buntar, which will be used for the production of high grade white rice.

Further selection and testing of pure strains of padi, cultivation and manurial experiments and work on padi soils have been continued throughout the year. In certain areas, more especially the important padi district of Krian, a position has now been reached where two or three high yielding strains can be recommended for general cultivation over two large areas in each of which conditions are fairly uniform. Steps are being taken to encourage the exclusive use of these strains in their respective areas in order to provide the Government Mill with large supplies of uniform grain and thereby to improve the quality of the rice produced.

The scheme whereby three scientific officers were appointed to the head-quarters staff of the Department of Agriculture exclusively for work on rice, came into being during the course of the year.

Tobacco.—This crop is grown mainly by Chinese usually in rotation with vegetables, although a certain number of Malay small-holders also cultivate it partly for their own domestic consumption. The planted area varies considerably at different periods of the year under the influence of season and prevailing prices. The crop is grown entirely to supply local demand and is sold on the cheapest market. The tobacco produced is of a coarse type and is usually manufactured into fine cut leaf in primitive factories by Chinese or is made up into cheap cheroots for local consumption.

The area under tobacco in the Federated Malay States during the year 1935 was estimated to be 2,094 acres, an increase of about 500 acres as compared with the previous year. This figure does not, however, include the total area planted or harvested during the year; the crop occupies the ground for 4½ months, so that many areas would have been harvested within the year and not included in the area existing at the end of the year. It would be fair to assume that the total area planted was twice the area recorded at the end of the year.

Prices for locally grown tobacco varied considerably in different localities, so that it is quite impossible to strike an average for the year; prices in the Federated Malay States are, however, usually higher than in any other part of the Peninsula. The highest recorded was $82 per pikul. It is probable that in the tobacco producing States the following range of prices per pikul ruled for the different grades: first quality $36 to 65; second quality $20 to 50; third quality $10 to 30.

For a number of years experiments were carried out by the Department of Agriculture at Singapore and at Serdang on the production of flue-cured leaf yielding the yellow Virginian type of tobacco suitable for making cigarettes. These experiments showed, however, that under climatic conditions in Singapore and Selangor it is uncertain to what extent a satisfactory cure can be relied on, as the operation of a flue-curing barn demands that dry weather should prevail when the leaf is being treated; in Singapore and on the western side of the Peninsula these conditions are not satisfied sufficiently to make the preparation of yellow leaf an assured proposition.

Stem borer again caused a fair amount of loss during the year. Other pests and diseases of importance are leaf-eating caterpillars, slime disease and mosaic disease.

Fruit.—There is a large demand for local varieties of fruit, especially in the urban centres; the demand is by no means satisfied by local production, in consequence there are considerable imports of fruit from the Netherlands Indies and China each year. The total value of these imports of fruit into Malaya for 1935 was $3,097,510.

Fruit is grown extensively on small-holdings, the majority being cultivated by Malays, and, in the mixed population of trees which invariably forms a feature of Malay kampongs, a fair proportion of fruit trees is always found. There are, however, at a few points, a number of fruit orchards cultivated by Chinese.

Excluding pineapples the range of fruit cultivated is very extensive and includes such things as bananas, mongosteens, pulasans, rambutans, durians, chikus, belimbings, langsats and the like. There is scope for the extension of the fruit producing industry and for improvements in marketing fruit by combination among growers. A feature of the situation is the periodical gluts which tend, during seasons of flush production, to reduce prices temporarily to uneconomic levels.

It is estimated that in the Federated Malay States some 32,956 acres were planted with fruits of various kinds, excluding pineapples but including some 10,000 acres of bananas. The main fruit season was a good one, although the secondary fruit season was rather late and distinctly poor.

A brisk demand exists for planting material of fruit trees of known good quality and in spite of the extension of the arrangements for the propagation and distribution of fruit trees at various agricultural stations the demand continued to exceed the supply.

Vegetables.—The production of vegetables for sale in towns by Chinese market gardeners is an important minor agricultural industry, but of late years there has been a steady tendency towards increasing the vegetable cultivation by Malay small-holders. Market gardens exist throughout the country but most extensively near the large towns. The total area under vegetables and the total production is not known, but market gardening is of considerable importance in Perak and Selangor, while in Pahang it has increased considerably during the past years. In Selangor it is reported that the movement towards the replacement of night-soil by artificial fertiliser, among Chinese vegetable growers, has continued and is now firmly established in the more important centres.

At Cameron Highlands private vegetable growing is usually confined to house owners for domestic consumption, but there are other owners who produce vegetables for sale; these are mainly Asiatic cultivators many of whom are sub-tenants in the mukim of Ringlet.

Despite the increasing popularity of vegetable cultivation, imports into Malaya of vegetable produce remained at a high level in 1935. The total net imports were 51,961 tons valued at $3,752,863 as compared with 54,000 tons valued at $3,837,808 in 1934, while the average net annual imports for the previous ten years were 45,703 tons.

Arecanuts.—The crop is cultivated on an area of 3,897 acres in the Federated Malay States. The largest areas exist in the Unfederated Malay States and in Johore alone there were close on 37,000 acres. Recent prices have not been such as to encourage the cultivation of this crop.

Statistics are not available of the total crop harvested by reason of the fact that the export returns do not represent the total local production, there being a considerable but unascertainable local consumption. In 1935 net exports from Malaya were 22,885 tons valued at $2,941,283 as compared with 27,336 tons valued at $2,497,940 in 1934. The average net annual exports in Malaya for the previous 10 years were 27,500 tons.

Market prices were somewhat higher in 1935 than in the preceding year, the average declared trade value of arecanuts being **$128.52** as compared with $91.38 in 1934. The local market price varies considerably according to quality and it is therefore difficult to strike an average price for the year. The average prices in Singapore of Best and Medium were **$6.74** and **$6.18** respectively.

Experimental work on the cultivation of a large number of varieties of arecanut were continued at the Klang and Serdang Experiment Stations, while areas under selected varieties exist on a number of agricultural stations.

GENERAL.

New agricultural stations were opened at Telok Datoh in the Kuala Langat district of Selangor and at Raub in Pahang, while new padi test plots were opened at Kuala Lipis and Bawang in Pahang and at Ampang Tinggi, Kuala Pilah, in Negri Sembilan. Existing experiment stations, agricultural stations and test stations of which there are now 39 in the Federated Malay States were maintained in satisfactory order during the year. At the Central Experiment Station, Serdang, work was continued on a large number of crops; the Station continued to attract a large number of visitors. Work at the Coconut Experiment Station at Klang proceeded in accordance with the established programme together with experimental work on copra production. Rice breeding work was continued at the two Experiment Stations at Titi Serong and Tallang, while a large number of experiments on tea were continued at the Experiment Station at Cameron Highlands as well as at Serdang. The agricultural stations continued to discharge their functions on the lines which they were designed to follow and have proved their value as centres for demonstration and instruction. There was a very considerable distribution of planting material both from the Central Experiment Station, Serdang, and also from agricultural stations throughout the Federated Malay States.

Four hundred and twenty-six school gardens were upkept in the Federated Malay States during the year; the general standard of work thereon continued to improve and the annual competitions showed that a satisfactory high standard of upkeep was everywhere maintained. In this connection the home gardens competitions under which pupils in elementary schools are encouraged to maintain gardens in their own homes continued to operate successfully in certain States, particularly in Selangor.

The Malayan Agri-horticultural Association held its 12th Malayan Exhibition in Kuala Lumpur in August, while nine successful district shows were held in the States of Perak, Selangor and Pahang in addition to the local padi shows.

The second annual All-Malayan Padi Competition, conducted by the Malayan Agri-horticultural Association with the aid of Administrative and Agricultural Officers, took place during the year and represented a further advance over its predecessor. In the first stage of this Competition local padi shows are held throughout the country while in the second stage prize-winning exhibits from these shows are judged at the Exhibition in Kuala Lumpur and prizes are given for the best exhibits. An important innovation consisted in the institution of a similar competition for rubber, the first of which successfully took place in 1935.

The School of Agriculture, Malaya, situated at Serdang, and supported jointly by the Federated Malay States and the Straits Settlements Governments, continued to operate very successfully. At the close of the school year in April, 1935, there were 70 students on the books and at the opening of the new session in May the number had risen to 76, this being only four short of the maximum capacity of the school. Of the 46 students who left the school in April, 34 have obtained employment either in the Government service, the Rubber Research Institute of Malaya or in private companies.

The headquarters research staff of the Department of Agriculture continued to be maintained in Kuala Lumpur; during the year 18 papers representing results of scientific research were published in the *Malayan Agricultural Journal*, as well as in two Bulletins; in addition 13 articles and 3 bulletins on general agricultural subjects were published. Close liaison was maintained between the scientific staff and Agricultural Officers in the Field Branch of the Department of Agriculture during the year.

Proposals were approved for the erection of badly needed additional laboratory accommodation at the headquarters of the Department and provision entered in the Estimates for new chemistry and soils laboratories; it is hoped that these will, at a later date, be followed by new laboratories for entomology and mycology. It is satisfactory that the improved financial situation has at last enabled provision to be made to remedy a state of affairs which has admittedly been extremely unsatisfactory for many years past.

A feature of the year has been the large number of scientific officers from other parts of the world, who have visited the Department and have requested to be given work and accommodation in the departmental laboratory. In existing conditions it has at times been very difficult to meet these requests, while the accommodation provided has been inadequate. The erection of new laboratories will enable such requirements to be catered for more adequately in the future.

The Department continued to issue the *Malayan Agricultural Journal* published in English, three series of special bulletins in English and as well as Agricultural Journals in Malay and Chinese. A new departure during the year was the issue of the first number of an Agricultural Journal in Tamil.

The Rubber Research Institute continued to operate successfully during the year; in accordance with the recommendation of the Commission of Enquiry into the affairs of the Institute appointed in 1933 a new constitution was provided for it by Enactment No. 15 of 1934, under the provisions of which the Institute has operated with smoothness and efficiency.

Sixteen papers were published in the Journal of the Institute representing the results of the work of the scientific staff while heavy demands continued to be made on the Institute for advice and guidance by the planting industry. Two additional scientific officers were appointed to the staff.

Proposals were approved for the erection of new premises for the Institute in view of the expiration of the lease of the converted dwelling-house hitherto occupied by it. A commencement was made with the erection of the new buildings towards the end of the year and it is anticipated that they will be ready for occupation by the middle of 1936.

LIVESTOCK.

The Dairy Farm at Fraser's Hill maintained the supply of milk, vegetables and eggs for consumption on the Hill, while there was a small surplus available for sale in towns on the plains. Sales improved considerably as compared with the previous year and were in excess of the expenditure under the head, Other Charges, by approximately $2,000.

At the Serdang Stock Farm further work was continued on the establishment of crosses between Friesian and Montgomery and Jersey and Montgomery cattle. There were 59 head of cattle of different ages on this farm at the close of the year. A portion of the milk derived from this undertaking was sold to Government hospitals and the remainder to private consumers in Kuala Lumpur. An additional cattle byre was erected to accommodate the young stock during the year. The revenue obtained from the sale of produce from this farm was again in excess of expenditure.

Reports of the Health Department on the quality of the milk from both the Fraser's Hill and Serdang farms show that bacteriologically it conforms with the standard laid down for certified milk in England. Both milk and herds have been subjected to the tuberculin test and found to be free from tuberculosis.

The section of the farm devoted to pig breeding has again proved successful and 15 head were sold for breeding purposes during the year.

Chinese pig breeders and market gardeners in Selangor, and to a less extent in Perak and Negri Sembilan have taken full advantage of the supply of pure-bred boars for the purpose of crossing with the native sows and it is estimated that the number of cross-bred animals in Selangor alone exceeds 15,000 head.

Much attention has been devoted to the improvement of poultry on small-holdings throughout the Federated Malay States. The services of the Poultry Instructor were discontinued at the end of June, but by that time four officers of the department had undergone intensive courses of training in poultry husbandry during periods of leave. Poultry work at the School of Agriculture has been extended and a certain amount of experimental investigation on feeding methods has been carried out there during the year and has given interesting results.

Poultry sections have been maintained at seven agricultural stations in the Federated Malay States and there has been a steady demand for birds from those stations for crossing with kampong poultry. Distribution has been mainly confined to cockerels and setting of eggs.

Considerable advances have been made in relation to the instruction of kampong poultry keepers and a useful innovation during the year was the devising of a night ark which can be cheaply constructed in the kampongs for the housing of poultry at night.

Poultry diseases have continued to take toll of kampong stocks, but the position in this respect is possibly somewhat better than in previous years. Instruction on poultry husbandry was continued in connection with tours of the Rural Lecture Caravan and talks were given on better housing and feeding of village poultry at all centres visited.

Livestock surveys (with the exception of poultry, figures for which are unobtainable) indicate a total increase in the number of livestock of all species in the Federated Malay States. Individual States, however, show decreases in certain species. It is considered that the figures obtained during 1935 are more reliable than hitherto, and with the exception of swine, and possibly goats, the increases noted may possibly be the result of a more accurate census.

The following table shows the increases [marked (+)] and decreases [marked (−)] in each species in each State:

State.	Oxen.	Buffaloes.	Sheep and goats.	Swine.
Perak	+ 1,755	− 266	+ 5,958	+ 9,690
Selangor	+ 6,118	− 136	+ 9,643	+ 13,542
Negri Sembilan ...	+ 2,905	− 1,983	− 1,775	− 1,257
Pahang	+ 250	+ 2,414	+ 4,792	− 1,364

It will be noted that the decrease in buffaloes in Perak and Selangor is small, while the increase in Pahang indicates a satisfactory steady rise. The increase in goats in all States, except Negri Sembilan is encouraging, as also is the marked increase in swine in Perak and Selangor. Both Negri Sembilan and Pahang should at least be self-supporting in swine for slaughter.

There does not appear to have been any marked improvement in animal husbandry generally, but attention has been paid to the possibilities of improving the position particularly in regard to dairy cattle near the towns in Ipoh (Perak), and on rubber estates in Negri Sembilan. Planters in the latter State have shown an interest in the work which is considered important not only with a view to controlling the livestock on plantations and effecting improvements in the type of animal maintained, but also to improve the milk supply to coolies and their families.

As yet it cannot be said that efforts to improve the type of poultry kept in kampongs have met with any great success but the work continues and it is hoped that in time the people will see the advantages to be obtained from improved poultry husbandry methods.

In Perak and Selangor the pig industry has progressed. As a result of the prohibition of imports, local production has of necessity increased except in Negri Sembilan and Pahang where there has actually been a decrease in the number of pigs kept by Chinese. Pahang at present obtains all its requirements of live pigs for slaughter from Selangor and should at any time this inter-State movement cease as a result of disease outbreaks, there will no doubt be a sudden shortage of fresh pork in Pahang. The ways and means of making Pahang self-supporting in swine is receiving attention, but at present it seems that until the State has experienced a shortage, it is not likely to appreciate the value of fostering its own industry.

The livestock shows in Pahang and Negri Sembilan are popular and prove a means for stimulating interest in the keeping of the different classes of livestock.

It was necessary in May and June to prohibit absolutely the importation of oxen, buffaloes, goats, sheep and swine from Siam, on account of rinderpest. Similar action was necessary in September in respect of animals from Indo-China. This resulted in an increase in the slaughter of locally produced animals, and in increases in the importations of oxen and buffaloes from the Unfederated States of Kedah and Kelantan. As a result of an outbreak of rinderpest in Kedah in September, a check in the trade in slaughter animals from that State occurred, but the energetic measures applied to eradicate the infection proved very effective with the result that there was a very small loss of stock in Kedah and the trade was re-opened in December.

Outbreaks of rinderpest occurred in Perak, Selangor and Negri Sembilan. A total of some 100 head of buffaloes died or were destroyed in Perak as a result of outbreaks in January and April. The origins of the infection could not be determined. The origins of the outbreaks in the Tampin district of Negri Sembilan, where there were a total loss of some 45 head of buffaloes, also remained obscure.

The same disease was discovered in a consignment of 39 buffaloes imported from Siam to Telok Anson (Perak) quarantine station. All these animals were affected and were destroyed immediately. Two oxen of a mixed consignment of Bangkok (Siam) and Saigon (Indo-China) animals imported from Singapore were found affected at the Bungsar Road (Selangor) quarantine station. The two affected animals were immediately destroyed and no further spread of infection occurred.

An outbreak of haemorrhagic septicaemia in September was responsible for the loss of 14 animals at Batang Padang (Perak). At the Merapoh (Pahang) quarantine station this disease was responsible also for the loss of seven buffaloes imported from Siam.

Foot-and-mouth disease occurred in cattle near Ipoh (Perak) from May to July when the disease was finally eradicated. The mortality totalled only four head.

Outbreaks of goat-pox and contagious caprine pleuro-pneumonia were responsible for over 1,700 deaths in Parit Buntar (Perak) district. A further 1,000 head of goats became infected and recovered. Attempts to artificially immunize goats by means of locally prepared vaccine, and the application of small-pox vaccine (cow-pox), were not successful.

Outbreaks of poultry disease due to virus infection were not so frequently observed as formerly. In Perak, thirteen such outbreaks were reported while in Pahang there were four. An outbreak of fowl-pox was investigated in Perak, and experiments commenced on the application of fowl-pox vaccine.

The following table gives the livestock census during the year:

State.	Buffaloes.	Cattle.	Sheep and goats.	Pigs.	Horses.
Perak	14,795	26,795	48,816	58,328	139
Selangor...	2,681	16,700	32,191	113,733	200
N. Sembilan	10,249	10,635	20,685	32,590	11
Pahang	22,305	4,908	22,097	14,266	19
Total ...	50,030	59,038	123,789	218,917	369

The imports of buffaloes, cattle, sheep and goats, and swine during the year were 7,686, 3,706, 11,689, 32,981, respectively. The corresponding figures for 1934 were 15,366, 6,520, 7,840, 63,502, respectively.

FORESTS.

The total area of land under forest at the close of the year was 21,871 square miles, of which 7,478 square miles is comprised in forest reserves, the remainder being wild life reserves and State land. By no means the whole of this area, however, can be classed even as potentially productive, for much of the State land forest has been subjected for years to destructive exploitation, particularly in the western States, while many of the reserved forests were constituted primarily to protect steep mountain slopes from erosion and either contain little valuable timber or, by reason of their inaccessibility, are unlikely to be economically exploitable for many years to come.

The improvement in the demand for timber recorded last year was well maintained, but there was a further decline in the market for firewood, though charcoal showed a slight improvement. Outturn figures for 1935, and 1934 in brackets, in thousands of solid cubic feet, were: timber 8,577 (6,948), firewood 8,608 (9,230) and charcoal 1,134 (994). While the bulk of the timber produced in the Federated Malay States is required for domestic consumption, the export trade, mainly from Telok Anson to Penang and from the coast of Pahang to the Singapore sawmills, rose in value from $624,254 to $922,665.

A system of tree poisoning, which was introduced experimentally at the end of 1934, was thoroughly tested on a large scale and gave most satisfactory results. The object is the elimination of inferior tree species, the removal of which is an essential process in the regeneration of forest reserves under conservative management. Formerly it was often possible to dispose of such species profitably as firewood, but, with the continued shrinkage of the firewood market, it is now usually necessary to remove them by departmental agency. The use of poison (sodium arsenite) has very considerably reduced the cost of such work.

There is still urgent need for extending sawmill facilities in the western States and it is satisfactory to record that three new sawmills were erected during the year, two in Selangor and one in Negri Sembilan. These mills, though of small capacity, are of servicable type and have been designed, with the assistance and advice of the Forest Engineer, for dealing with the output of raw material from forests under regular management.

The financial results of the year's working were as follows, figures for 1934 being given in brackets for comparison:

Revenue $1,091,346 ($792,040);

Expenditure (including clerical services) $876,982 ($676,950);

Surplus $214,364 ($115,090).

Of the increase of $200,000 in expenditure rather more than $90,000 is accounted for by increased activity of the Timber Purchase Section, which purchases timber on behalf of the Railways and other departments from a suspense account. Such expenditure is recouped as soon as the timber is taken over by the purchasing department, the recoupments being included under "revenue".

Revenue from minor forest produce, which has been declining for some years, showed signs of recovery. In particular there was a marked recovery in the demand for *jelutong*, the price of which rose, towards the end of the year, from $20 to $30 a pikul.

The work of the Timber Purchase Section again showed an increase. Purchases on behalf of the Railways rose from $229,271 to $628,218, while business handled on behalf of other consumers amounted to $144,514, as compared with $55,803 in the previous year.

Research on forest products, botany, wood technology and silviculture was carried on at the Forest Research Institute, Kepong, and the testing and preservative treatment of timber continued to be the subject of investigations at the Timber Research Laboratory, Sentul. Research on preservative treatment is very important since the consumption of naturally durable hardwoods is proceeding at a rate far in excess of replacement (a state of affairs by no means peculiar to Malaya) and available supplies are within measurable distance of exhaustion.

Federal and State duty posts held by officers of the Malayan Forest cadre numbered 26 at the close of the year. The locally-recruited English-speaking staff comprised three Extra Assistant Conservators and eight Sub-Assistants. The strength of the subordinate staff was 469, exclusive of 59 clerks, 39 boatmen and 16 technical and clerical subordinates in the Timber Research Laboratory and Timber Purchase Section.

FISHERIES.

There were no unusual fluctuations in the fishing industry during the year under review, and the improvement due to better conditions in the staple industries of the country has been maintained.

Most of the experiments on fish salting, canning and cultivation of fresh water fish were performed in Singapore.

Canning has proved to be an excellent method of preservation. It is hygienic and economical and is distinctly promising, although it should not be expected that any development on a highly industrialised scale will follow; the trial packs received the approval of the dealers in Singapore. It will, however, be necessary to exercise the closest supervision if it is to become an industry.

It has been found possible to increase the period of storage of boiled bilis (Stolephorus) by storing in a vacuum or in CO_2 from one month to six months. This is a welcome result since it makes it possible now to meet the demands of one centre during a time of scarcity from the supply of another during a time of abundance. The cost of storing in bulk is small, and experimental work on a small commercial scale will be undertaken in 1936.

A considerable amount of valuable information has been obtained concerning the cultivation of local fresh water carp, Terbol (Osteochilus) and Lampam (Puntius Schwanefeldi). Experiments on feeding these fishes with peanut cake which were carried out in a pond on an estate in Gopeng (Perak) showed an increase of 50 to 60 per cent. in the output of the pond. There was a great increase in the fat content of the body and the fish rose in the estimation of the local consumers to a very marked degree. Previously, these fishes were fed only on small quantities of the unconsumed coconut scrapings and rice from the house. The use of peanut cake as a feed for vegetable-eating carp has stimulated Malays in other areas to try it.

In connection with the proposed fish cultivation in the newly-opened rice-growing area in Lower Perak, it is of interest to record that nearly 909,000 katis or 530 tons of the fish Sepat Siam (mud-fish) passed through the hands of the dealers in a salted and dried state in 1935. This weight of fish was produced in the rice-growing areas of Krian, and the price paid to the fishermen would represent a total of $54,500. In addition, 107,000 katis or 63 tons of Aruan (Ophiocephalus) and 240,000 katis or 140 tons of Keli (Clarias Magur) passed through their hands in a live state, and together realised approximately $16,200, bringing the value of the yield from this area to $70,700. This is a minimal figure and takes no account of what is consumed locally or what has not been recorded.

The irrigation storage reservoir at Bukit Merah yielded approximately 335,000 katis or 200 tons of fish which realised approximately $13,400.

An attempt was made to introduce rainbow trout into the streams in the Cameron Highlands in Pahang and a consignment of 20,000 eyed ova was received from Blagdon in Somersetshire by the Blue Funnel steamer "Antenor". About 60 per cent. of the ova perished on the way out but the survivors were satisfactory and it is encouraging to report that over 5,000 well grown fish were liberated in the various streams in the Highlands and appear to be quite at home in their new surroundings.

In order to augment the supply of fresh fish for the Singapore market a contribution of $15,000 was made by the Federated Malay States towards the cost of providing a vessel fitted with refrigeration equipment to collect fish at sea and brine-freeze it on the spot and carry it in cold storage to market. It is expected that this method of handling catches at sea will not only prove beneficial to the public, but will benefit the fishermen by securing a better price for their catches than can be obtained from salt fish.

The total number of persons employed in fishing amounted to 14,013 of whom 7,863 were Malays, 6,075 Chinese, 74 Indians and one of other nationality.

The fishermen as a whole are poor, and although they grumble at their lot few know anything about economy. They seem to be reconciled to exist on the few cents which they can earn daily, and as the regularity of the seasons and the yield of the industry vouchsafe their future they are never seriously troubled about it. It is no uncommon thing for Malay fishermen to stop fishing during an abundance of fish when they have earned rather more than usual and to remain ashore to enjoy themselves, although they could continue profitably for a further period. The Chinese fishermen as a rule are thrifty to a degree, but most of them are only temporarily resident in the country.

When they have saved sufficient money from their earnings they return to China, and naturally they are not interested in any reforms in the industry. These circumstances and the lack of co-operative effort on the part of the fishermen militate against any progress that might be made in the industry.

The much maligned dealer who finances the fishermen performs a difficult task, and without him it is questionable how the industry could be financed. He advances them money for fishing equipment solely on the security of a verbal agreement which gives him a monopoly of the fish caught. He must, however, live on the spot to secure it and it would be a difficult task to find any one else capable and willing to undertake such a function. It is not surprising, therefore, to find that his prices to the fishermen are low and that the estimation of the weight of the catch is not always what it should be with his loans secured by such slender ties. Efforts are, however, being made to ameliorate the condition of the fishermen, but with little co-operation on their part it is not expected at present that there will be much progress.

MANUFACTURES.

There are but few manufacturing concerns in the Federated Malay States. They include four aerated water factories, one match factory, six distilleries, one plywood factory, two pineapple canning factories, one cement works, and a few tile and brick factories.

CHAPTER VII.

Commerce.

The aggregate declared value of the imports, exports and re-exports of the Federated Malay States with countries situated outside the Federation as compiled from declarations received at the Central Trade Registry during the year 1935 is $273,872,976 as against $287,456,400 a decrease of $13,583,424 or nearly 5 per cent.

While the declared value of the imports has risen by over 2 million dollars, there is a decrease in the aggregate value of the exports of nearly 16 million dollars mainly due to the effects of rubber control.

During 1935, the price of tin varied from $105.50 to $116.25 and averaged $111.38 per picul as against $114.43 per picul in 1934.

The price of rubber varied from 17½ cents to 22½ cents with an average of 20.3 cents per pound in 1935, as against 20.6 cents per pound in 1934.

The price of copra (sun dried) varied from $3.85 to $5.45 and the average price for the year 1935 was $4.52 per picul as against $2.94 per picul in 1934.

The total value of the imports, exports and re-exports, including bullion and parcel post for the last six years were as follows:

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1930 ...	168,020,418 ...	213,652,044 ...	45,631,626
1931 ...	106,201,211 ...	125,177,183 ...	18,975,972
1932 ...	71,133,301 ...	87,851,281 ...	16,717,980
1933 ...	67,129,150 ...	111,885,935 ...	44,756,785
1934 ...	84,731,059 ...	202,725,341 ...	117,994,282
1935 ...	87,102,149 ...	186,770,827 ...	99,668,678

and while the favourable trade balance is not as large as in the previous year, the reduction is due to the decreased output of rubber permitted under the restriction scheme and which accounted for a decrease in quantity of 62,038 tons and of $28,612,765 in value. The reduction in the favourable trade balance would have been greater but for the increases in the quantity and value of tin-ore (5,849 tons—$8,730,398), copra (19,613 tons—$3,177,031), and palm oil (5,253 tons—$880,305) exported during 1935.

The purchasing power of the Federation was being maintained as is illustrated by the steadiness of the total declared value of the imports into the Federation for each quarter, given below:

MERCHANDISE, PARCEL POST, BULLION AND SPECIE.

——	Imports.	Exports.	Re-exports.	Total.
	$	$	$	$
1st quarter, 1935 ..	21,946,105	37,361,536	1,057,913	60,365,554
2nd ,, ,, ..	21,270.757	40,972,633	1,161,170	63,404,560
3rd ,, ,, .	21.310,274	49.715,839	986,160	72,012,273
4th ,, ,, ..	22,575,013	54,501,656	1.013,920	78,090,589
Total	87,102,149	182,551,664	4,219,163	273,872,976

The percentage distribution of the import, export and re-export trade of the Federated Malay States for the last three years is as follows:

IMPORTS.

Countries from which imported.	1933.	1934.	1935.
Singapore	32.78	31.42	30.55
Penang	18.24	17.61	19.54
Malacca	2.36	2.00	2.20
Unfederated Malay States	2.73	2.28	2.34
United Kingdom	12.68	12.70	13.65
Other British Possessions	9.43	9.36	10.52
Continent of Europe	2.39	2.54	2.45
Siam	9.09	9.45	7.53
Netherlands Indies	8.71	9.93	8.48
Other Foreign Countries	1.59	2.71	2.74
	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1933.	1934.	1935.
Singapore	25.94	23.12	24.18
Penang	27.06	28.08	33.13
Malacca	3.45	2.54	1.23
Unfederated Malay States	.87	.60	.49
United Kingdom	9.96	16.62	15.46
Other British Possessions	.92	1.14	1.75
United States of America	18.97	15.23	14.02
Other Foreign Countries	12.83	12.67	9.74
	100.00	100.00	100.00

One of the features of the year affecting trade was the enforcing of sanctions against Italy under the Covenant of the League of Nations by His Majesty's Orders in Council wherein restrictions and prohibitions were imposed upon trade with Italy and its colonies and dependencies. The products of Malaya which were chiefly affected were rubber and tin.

The foreign (external) trade of Malaya, representing the Colony of the Straits Settlements, the Federated and the Unfederated Malay States, in merchandise, bullion and specie and parcel post, amounted in value to $1,063 (£124) millions, as compared with $1,040 (£121) millions in 1934, an increase of 2.2 per cent. Imports increased by $8 millions or 1.7 per cent. and exports by $15 millions or 2.6 per cent. Increases in both the import and the export trade were spread over the majority of the principal products, the largest increases being in the imports of rice, copra, kerosene, motor cars, dredges and dredging materials, and in the exports of tin, copra, motor spirit, coconut oil, rice, kerosene, palm oil, pineapples, arecanuts, iron ore, and sago flour. There were, as a counterpoise, considerable decreases in the imports of pepper, cotton and artificial silk piece-goods (due to textile quota regulation), rubber, sticklac and cycle parts and in the exports of rubber (due to Rubber Regulation), sticklac and cotton piece-goods. Exports of rubber decreased by approximately $20,546,000 and those of tin increased by about the same amount ($20,570,000).

The $1,063 millions of external trade consisted of imports $479 ($471) millions and exports $584 ($569) millions, the figures for 1934 being shown in brackets. The value of bunker coal, oil fuel and stores taken on board ships on foreign trade routes for their own consumption amounted to $12 ($11) millions and if this is added to the excess of exports there was a favourable trade balance of $117 millions, as compared with a favourable balance on the same basis of $109 millions in 1934.

Of the $1,063 millions, representing the trade of Malaya, $909 ($887) millions or 86 (85) per cent. indicate the direct foreign trade of the Straits Settlements, $121 ($126) millions or 11 (12) per cent. the direct foreign trade of the Federated Malay States and $33 ($27) millions or 3 (3) per cent. that of the Unfederated Malay States.

For the Federated Malay States, the total trade amounted to $274 millions as compared with $287 millions for the previous year, a decrease of $7 millions or 3.4 per cent. as shown in the quarterly returns of the Customs Department. Of the $274 millions, $116 millions or 42 per cent. represented foreign trade, $155 millions or 57 per cent. trade with the Colony, and $3 millions or 1 per cent. trade with the Unfederated Malay States.

CHAPTER VIII.

Wages and Cost of Living.

The average weighted index of commodity prices, represented by 17 principal commodities (15 wholesale and 2 retail) increased by .8 per cent. as compared with 1934, due principally to increases in the prices of coconut oil, copra, palm oil and rice. There were increases also in the prices of arecanuts, damar, gambier, pineapples, sago flour, tapioca flake and tea.

The General cost of living index numbers for the Asiatic, Eurasian and European standards as compared with 1914 and 1934 were as follows and shows that the present cost is higher, in respect of all three standards, than in 1914:

Standard.	1914.	1934.	1935.	Percentage increase + or decrease – in 1935 as compared with 1934
Asiatic	100	103.2	108.1	+4.7
Eurasian	100	108.5	109.0	+0.5
European	100	124.4	124.7	+0.2

The bulk of the labour in the Federated Malay States is employed on rubber estates and tin mines. The labour on the former comes in the main from Southern India whilst that on the latter is mostly Chinese.

Since 1923 the Indian Immigration Committee has had the power to prescribe standard wages for South Indian labourers, such rates being based on a standard budget including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. In 1930 the following standard rates were fixed:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult able-bodied male.
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult able-bodied male.
37 ,, ,, ,, female.

Standard rates are the minima paid in Government departments.

The price of rubber fluctuated during the year but the important factor affecting wages was the operation of rubber restriction. With a reduced output without a compensating increase in price the amount of work available gradually decreased and as labourers were not discharged, in the second half of the year, wages for morning work of 35 cents for men and 28 cents for women became common instead of the rates of 40 cents and 32 cents which were more usual at the beginning of the year.

The price of Rangoon rice which is the staple article of diet for estate labourers increased during the year, reaching in October a maximum in Singapore of 23 cents a gantang. There was little change in the cost of the other articles included in a typical South Indian labourer's budget.

As assisted immigration from South India declined and the repatriation of labourers who were temporally unfit for work continued, the amount of unemployment was negligible and at the end of the year a balance was reached between demand and supply.

The wages of Chinese labourers on small estates were usually higher than those for Indians, varying from 40 to 65 cents a day. Of the labour engaged in mines some 20 per cent. is on contract, the balance being in receipt of wages.

CHAPTER IX.

Education.

A.—GENERAL.

The expenditure upon education (including $112,715 spent by the Public Works Department on the building and upkeep of schools) was $2,907,399. Of this sum, $386,851 was paid in grants to English aided schools, $55,738 in grants to Tamil vernacular schools and $79,897 in grants to Chinese vernacular schools. The total revenue amounted to $591,794 of which the sum of $230,462 represents the proceeds of the education rate, the remainder being derived from school fees and miscellaneous sources. The net expenditure on education was, therefore, $2,315,605.

Education facilities are provided in the Federated Malay States in English, Malay, Chinese and Tamil.

Schools are either Government, Aided by Government, or Private.

All schools (other than those in which the teaching is of an exclusively religious nature) in which ten or more persons are habitually taught in one or more classes, and all supervisors, committees of management and teachers of schools, must be registered in accordance with the Registration of Schools Enactment. In pursuance of the decentralisation policy of the Government the powers of the Chief Secretary have been handed over to the Resident in each State and those of the Federal Director and Assistant Directors of Education to State officers who are now called Superintendents and Assistant Superintendents of Education.

B.—ENGLISH EDUCATION.

The English schools are schools in which English is the medium of instruction. Few of the pupils are English speaking when they join. The lowest class may be composed of children speaking between them some seven or eight different languages or dialects, those speaking one language or dialect being generally quite unable to understand those speaking any of the others. In the circumstances the use of the "direct method" of teaching English is practically obligatory. Children are accepted into the lowest class at the age of six or seven and they are given an education which ends as a rule with their presentation at the Cambridge School Certificate Examination, though a few stay on and prepare for the London Matriculation Examination.

The fees are $30 (£3 10*s.*) a year for boys and $24 (£2 16*s.*) a year for girls for the first six years (i.e., for the years spent in the two Primary Classes and in Standards I to IV inclusive) and $48 (£5 12*s.*) a year for boys and $36 (£4 4*s.*) a year for girls for the remaining period. These rates remain in force for pupils enrolled prior to 1st January, 1934, but the rates for boys and girls enrolled on or after that date are $36 (£4 4*s.*) a year for the first eight years (i.e., up to and including Standard VI) and thereafter $72 (£8 8*s.*) or $108 (£12 12*s.*) a year according to the results of an examination, the successful pupils, up to 50 per cent. of the available places, paying the lower fee and the remainder paying the higher one.

Attendance is not compulsory.

In 1935 there were 23 Government English Schools for boys and 12 Grant-in-aid English Schools for boys and 13 for girls. The total average enrolments were 6,356, 5,512 and 4,628 respectively, a total increase of 688 on the 1934 figures.

Of the 16,395 pupils in English schools at the end of the year, 13,548 were receiving elementary education (i.e., up to and including Standard VI) and 2,847 secondary education (i.e., above Standard VI).

Two thousand and five (or 14.79 per cent.) of those receiving elementary education and 881 (or 30.94 per cent.) of those receiving secondary education were enjoying free education. The details of the nationalities so benefited were 234 Europeans and Eurasians, 1,678 Malays, 701 Chinese, 236 Indians and 37 others. On the whole 2,886 (or 17.6 per cent.) of the pupils were receiving free education.

The Aided English Schools are managed by various missionary bodies—the Christian Brothers, the Methodist Episcopal Mission, the Church of England, the Plymouth Brethren and the Sisters of the Holy Infant Jesus.

The Government pays to such schools monthly grants equal to the difference between their revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment, and salaries in respect of European Missionary teachers at the rate of $3,000 (£350) a year for men missionaries and $1,800 (£210) a year for women missionaries. Allowances at these rates, however, are payable only to 16 per cent. of the total authorized staff in boys' schools and 25 per cent. of that in girls' schools. The other missionary teachers, European and Asiatic, are paid at the rate of $1,440 (£168) a year for men and $1,200 (£140) a year for women. In Christian Brothers' Schools and Convent Schools no distinction is made between European and Asiatic Missionary teachers who are paid at a flat rate of $2,400 (£280) a year for men and $1,500 (£175) a year for women. Under certain conditions capital grants amounting to half the cost of approved new buildings are also paid by the Government.

Owing to the financial position the Government restricted the payment of grant-in-aid to two-thirds of the sum paid in respect of the year 1932. Government, however, excluded from this reduced grant-in-aid the liability for leave pay and passages in respect of one period of leave only after 1st January, 1934; i.e., such leave pay and passages were treated as additional to the reduced grant.

The Malay College, Kuala Kangsar, is a secondary school which in addition trains probationers for the Malay Administrative Service and for various Government departments. At the end of the year there were 102 students—40 from Perak, 18 from Selangor, 21 from Negri Sembilan, 12 from Pahang, 6 from Johore 2 from Trengganu and 3 from Brunei; all were boarders. The staff consisted of the Headmaster and two European and five Asiatic Assistant Masters. The general health of the boys was good except for a short period at the beginning of the year when fever was prevalent in the district; the Medical Officer, Kuala Kangsar, inspected the school regularly and occasionally gave lectures to the senior boys, and the Dental Surgeon, Selangor, visited it on three occasions and attended to dental defects. Thirteen out of 22 candidates from the College obtained the School Certificate, and 12 out of 18 candidates the Junior Certificate. Six probationers appointed in July, 1934, left in June and four new probationers arrived in August. Cadet and scout activities are part of the school routine. The strength of the Cadets was 2 officers and 50 other ranks; they were inspected by the Assistant Staff Officer to the Local Forces and received a good report. The average strength of the scouts was 3 officers, 45 scouts and 21 tenderfeet. Football (association), cricket and hockey are compulsory three times a week; on other days tennis, fives, badminton, swimming and physical drill keep the boys occupied; the usual Annual Athletic Sports Meeting was held. A Tuck Shop is run by the boys and the profits help the Games Fund. The cost of running the College was $56,041 as compared with $59,864 in 1934; the fees collected amounted to $8,561 as compared with $8,060. His Excellency the High Commissioner, visited the College on the 23rd of September.

There is no central college for the training of teachers for English schools. Such training was until recently supplied at Normal Classes held at certain centres in all States except Pahang; in Pahang correspondence classes took their place. These classes have been suspended temporarily, as the supply of teachers has overtaken the demand.

Secondary teachers are recruited mainly from Raffles College. In 1935 three Raffles College graduates were appointed to Government and Aided Schools in Selangor and two to schools in Perak.

C.—Vocational and Industrial Education.

Technical Education.—The Government Technical School, Kuala Lumpur, provides courses of training for students from the Public Works, Drainage and Irrigation, Railways, Electrical, and Posts and Telegraphs Departments, and gives accommodation also to a class conducted by the Survey Department for its untrained subordinates; a few private fee-paying students are also received. The number of students under full-time instruction in May (the end of the Technical School year) was 77, of whom 66 were apprentices from the departments mentioned, two were private students supported by Government and nine were private fee-paying students; 44 of the students were Malays. Thirty-four apprentices completed their training during the year and left, and 32 apprentices and 10 private fee-paying students were admitted for the new session in July; at the end of the year there were 75 students, of whom 17 were fee-paying; one student died, 11 apprentices were found incapable of responding to technical instruction and two private students left. The hostel, which accommodates 48 students, was occupied by 44 in May and was full in December. Thirteen of the nineteen candidates who sat for the final examination were successful.

One hundred and fifty-two candidates (as compared with 78 in 1934) entered for the City and Guilds of London Institute Examinations; 113 actually sat for them and 46 obtained passes; the percentage of passes, 41, although low, does not compare very unfavourably with the overall pass percentage of 48 for Overseas, Dominions and India candidates, when local circumstances are taken into account. On the 1st January, 1935, the school became a Selangor State Department, though its functions remain Malayan.

Commercial Education.—There were no purely commercial schools and no separate departments for purely commercial work in any of the schools.

Industrial Education.—There were schools engaged in giving an industrial education—the Trade Schools at Kuala Lumpur and Ipoh, and those at Bagan Serai and Rembau.

(*a*) The Trade School, Kuala Lumpur, admits boys from Selangor, Negri Sembilan and Pahang. The students do a three years' course, being trained to be fitters and motor mechanics. There were 98 students undergoing the motor mechanic course, of whom 59 were from Selangor, 24 from Negri Sembilan and 15 from Pahang. In June 22 students completed their course and all are known to have obtained employment. Additional up-to-date plant was ordered to enlarge the scope of practical training and to meet requirements due to increased enrolment.

A tailoring class with six students was formed in July, and an instructor engaged from the Johore Tailoring School. The class made good and rapid progress up to the end of the year.

It was accommodated in a building which previously formed part of the Maxwell School. A Technical Adviser from Messrs. Robinson & Co., Ltd., rendered considerable assistance.

There were 72 students at the Trade School Hostel at the end of the year.

(*b*) There were 73 students at the Trade School, Ipoh, 65 being Malays. Twenty-two completed the three years' course in June.

With a view to helping them to secure permanent employment, a scheme was devised to subsidise passed students, who were employed on probation with local firms for a period of six months at $10 a month. The experiment has proved successful. Of the 13 students so subsidised, 11 have been retained in employment, one left almost at once to go round the world and another joined the Ipoh Fire Brigade.

(*c*) The average enrolment of the Trade School at Bagan Serai was 24. Carpentry classes are attached to 12 Malay schools in Perak; 34 students were examined by the Bagan Serai instructor at the end of their three-year course, and 33 passed. Training in carpentry appears to be a definite wage-earning asset. Boys who have passed out and have settled in their villages earn about $10 a month from carpentry as a spare time occupation. Some ex-students have opened a carpenter's shop in Bagan Serai. They work on a co-operative basis and the number of workers varies with the amount of work in hand. At times there are only 2 or 3 hands but sometimes as many as 7 or 8.

(*d*) The Trade School at Rembau was closed at the end of the year owing to lack of support. It is to be regretted but it was obvious that neither the State, nor the District, could find work for 25 new carpenters every year.

D.—UNIVERSITY AND COLLEGIATE (POST SECONDARY) EDUCATION.

The highest educational institutions in Malaya are the King Edward VII College of Medicine, Singapore, and Raffles College, Singapore.

(*a*) The course of the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom. Licentiates of the College are thus able to secure admission to the Colonial List of the Medical Register and to be registered as medical practitioners in any part of the British Dominions.

There is also a fully organised dental school in which a five years' course of training is given, the diploma in Dental Surgery entitling its holder to practise in Malaya.

A four years' course for a diploma in Pharmacy enabling the holder to practise as a dispenser in Malaya commenced in June, 1935.

(*b*) Raffles College, Singapore, was opened in 1928 in order to place education of a University standard within the reach of all youths in British Malaya who were capable of profiting by it, and to meet an urgent need for qualified teachers for secondary classes. It provides three year courses in art and science. Diplomas are awarded to successful students.

(*c*) The annual examination for the Queen's scholarships was held in October. There were 17 candidates for the open scholarship and four candidates for that confined to Malays. The scholarship open to all races was awarded to Ng Yok Hing of the Anglo-Chinese School, Ipoh, and that confined to Malays to Mohamed Suffian bin Haji Mohamed Hashim of the Clifford School, Kuala Kangsar. Ng Yok Hing proposes to study Medicine and Mohamed Suffian Law.

E.—Vernacular Education.

Malay vernacular education is entirely free. School buildings (as a rule), quarters for staff, staff, equipment and books are all provided by Government.

The aim in these schools is (i) to give a general and practical education to those boys who have no need of an education in English, and who will find employment either in agriculture or in appointments in which a knowledge of the vernacular is all that is required, and (ii) to provide a sound foundation in the vernacular on which an education in English can be superimposed in the case of boys who desire to proceed eventually to an English school. The school course normally lasts five years, during which period the pupils pass through five standards. The subjects of the curriculum are reading and writing (in the Arabic and Romanised script), composition, arithmetic, geography, Malay history, hygiene, drawing and physical training. Boys do basketry and gardening in addition.

In the Malay girls' schools all general subjects were taught, a shortened form of the syllabus in the boys' schools being attempted. In addition a full and detailed syllabus in needlework, as well as in some craft selected specially for each State, was followed. In the Perak schools domestic science was taught, one whole day a week being given up to instruction in laundry, housecraft and cookery. Drill and practical hygiene figured as subjects on every school time-table.

In 1935 there were 465 schools for boys and 82 for girls with average enrolments of 38,064 and 5,082 respectively. The figures for 1934 were 451 schools for boys and 82 for girls with average enrolments of 37,957 and 4,882 respectively. The increase was mainly due to the fact that nine boys' and one girls' schools, with average enrolments of 492 and 42 respectively, were handed over to the Perak Government on the retrocession of the Dindings. The Malay teaching staff numbered 1,519 as against 1,475 in 1934. There were 4,374 girls in boys' schools in Selangor, Negri Sembilan and Pahang.

All the Malay schools in Selangor have small libraries. The daily newspaper *Warta Malaya*, and the monthly magazine *Majallah Guru*, were supplied free by Government and the Malay Teachers' Association respectively. Teachers are encouraged to lend books and newspapers to pupils and their parents. Malay books of the "Home Libraries Series" were sold at some of the schools. Malay pupils were encouraged to buy stamps and save money in the Post Office Savings Bank. At the end of the year 1,305 school children had Savings Bank deposits with a total credit of $2,919.67.

A successful exhibition of school handwork was held in Rahang Malay School, Seremban. Amongst those who visited the exhibition were His Highness the Yang-di-pertuan Besar, the British Resident, Negri Sembilan, Dato Kelana, Dato Johol and the District Officer, Seremban.

The third holiday course for Malay gurus was held at Port Dickson for 11 days. Each of the 165 teachers present paid only $2.50 a head and the balance of cost was met by their association. Three Malay Assistant Inspectors of Schools and five teachers from Selangor, Pahang, Malacca and Singapore were present.

Monthly meetings of teachers were held in Pahang on the day following pay-day when discussions took place and instruction was given. The *Warta Pejabat* was issued six times. This magazine deals with educational matters and also the affairs of the villages and kampongs: it is issued to schools and penghulus.

Malay school gardens in Pahang were improved by the planting of fruit and other permanent plants as suggested by the Agricultural Department. Good progress was made with the introduction of poultry farming, 63 schools taking part. Thrift was encouraged by the use of bamboo money boxes (tabong). His Highness the Sultan of Pahang visited a number of schools. At his suggestion most parents have been persuaded to buy uniform clothing for their children.

At the end of the year there were 354 students and one Kedah Probationer Translator at the Sultan Idris Training College, Tanjong Malim. One hundred and seventeen students completed their three-year course. The total expenditure was $108,924 (as against $93,036 in 1934) towards which the Unfederated Malay States contributed $42,250 for their 84 students and one probationer. The cost of the establishment is borne by the State of Perak in the first instance and is subsequently apportioned between the States of the Federation, the Straits Settlements and the Unfederated States. The amount paid by the Federated Malay States and Straits Settlements respectively is proportionate to the number of students from each while the Unfederated Malay States pay a fixed sum for each pupil.

The College provides the highest course in Malay vernacular education obtainable in the Peninsula, while attached to it is a Translation Bureau which not only prepares the text-books required in the schools but also translates into the vernacular and sees through the press a variety of novels and books of general interest.

The Malay Women Teachers' Training College, Malacca, was opened this year with an enrolment of 24 students drawn from the Straits Settlements and the Federated Malay States; one student from Pahang was asked to discontinue her studies because of poor scholarship and lack of promise of improvement. During the first term and during the first month of the second term many cases of fever occurred, but for the last six weeks of the year the College was free from illness of any sort; the students submitted to medical examination and carried out the treatment prescribed without undue coercion; personal cleanliness was still rather unsatisfactory at the end of the year but much has been achieved by strict supervision and individual attention. There was no trouble over discipline and behaviour, which were excellent. Any previous capacity possessed by the students on admission consisted of some aptitude for careful workmanship in crafts but of little or no ability in mental activities; industrial subjects progressed satisfactorily but only fair improvement was shown in the others. Great keenness was exhibited at the start over badminton, netball and tennikoit (deck tennis) and there was soon marked improvement in skill, alertness and sense of play. Badminton tournaments were held at the College and at two of the other girls' schools in Malacca and the College players advanced from third place to second place in the course of them. At an open day for European ladies and English school teachers the students acted as hostesses and gave a performance of "Cinderella" in Malay. Visits were paid to places of historic interest and to such activities as the Post Office, an Aerated Water Factory, etc.; they were also taken to see suitable films. The Principal considers that the experiment is justifying itself in the happiness shown by the students, in their adaptability to their new life and in their improved health, but that the personal interest and strict supervision of a devoted staff is necessary if progress in mental, domestic and leisure time activities is to continue.

Chinese Vernacular Schools.—The two Government Chinese Vernacular Primary Schools at Kuala Lumpur, namely, the Chinese Free School at Davidson Road and the Chinese Free School at Sentul, continued to function satisfactorily. At the end of the year the former had a staff of one headmaster and seven teachers and an enrolment of 253 students, while the latter had one headmaster and two teachers and 79 students. Both schools accommodate both boys and girls and the education is free. The Davidson Road School is primarily for children of poor parents and the Sentul School for the children of Railway employees.

The number of Chinese schools receiving grants-in-aid in 1935 was 107 (as against 106 in 1934), Perak having 70 as against 69 in 1934, Selangor, Negri Sembilan and Pahang having 31, 4 and 2, respectively as in 1934.

The grants to Chinese vernacular schools are in two grades:

I	$10 per year per pupil
II	5 ,, ,,

in average attendance. In order to qualify for Grade I, schools must teach English for a certain number of hours each day with reasonable efficiency and must employ for that purpose a teacher who holds the minimum qualification of a Junior Cambridge Certificate or a certificate recognised by the Adviser on Education as of equal value.

An Inter-School Examination, the first of its kind, for Chinese Schools in the Straits Settlements and Federated Malay States was organised by the Department of Education and was held simultaneously in all four States on December 2nd and 3rd. There were 1,067 candidates from the schools in the Federated Malay States and 1,036 sat the examination, of these 239 (or 23.1 per cent.) obtained certificates. Ninety-six schools were represented of which 58 were aided and 38 non-aided. The examination was for the graduating forms of the Junior Middle and Upper Primary Departments, and all public schools which had a participating class and which were at a convenient distance joined in the examination. There were four examination centres in Perak, two in Selangor, one in Negri Sembilan and one in Pahang. Although the results were disappointing the examination should have an immediate effect on standardising and improving the work of the schools and in preventing careless promotion. The examination is looked upon with favour by the Chinese community.

Five Chinese schools (two aided) in the Dindings territory were taken over from the Education Department of the Straits Settlements in February when the area became part of the State of Perak.

There are facilities for the primary vernacular education of Chinese boys and girls in all villages of any size. Fees ranging from 50 cents to $3 a month are commonly paid but parents who are poor are either exempted from payment or pay half fees. Public schools which afford reasonable prospect of permanence and which have already received Government grants-in-aid are still receiving such grants according to their standard of teaching under the grades now in force. Many new applications for grants were received during the year.

There is no school in the Federated Malay States where only secondary education is given. There are, however, 18 Chinese schools (10 in Perak, 4 in Selangor, 3 in Negri Sembilan and 1 in Pahang) which have developed beyond the primary stage (a six-year course) and have secondary departments. The Confucian Boys' School, Kuala Lumpur, started a Senior Middle Department with an enrolment of 18 at the commencement of the second school term in August. Hitherto Federated Malay States Chinese schools have only had a Lower Middle School Department, i.e., the first three years of the six-year middle course. Fees in middle schools are paid at the rate of about $3 to $4 a month. There were 738 boys attending these schools at the end of 1935.

Secondary vernacular education for Chinese girls was provided at two girls' schools and seven mixed schools in Perak, one girls' school and two mixed schools in Selangor, three mixed schools in Negri Sembilan and at one mixed school in Pahang. There were 294 girls attending these schools at the end of 1935.

At the close of the year there were 394 registered Chinese schools with 1,212 registered teachers. The total enrolment was 29,528 of which 7,822 were girls. Compared with the previous year there is an increase of 31 schools, 164 teachers, 2,854 boys and 930 girls.

Tamil Vernacular Schools.—At the end of the year there were 13 Government Tamil vernacular schools as in 1934—eight in Perak, four in Selangor and one in Negri Sembilan. In addition there were 297 aided schools (as against 251 in 1934). There were 12,771 pupils in both Government and aided schools, a total increase of 2,439 on the 1934 figures. Though co-education is not a policy, a number of girls attend boys' schools. One thousand seven hundred girls were in boys' schools in Selangor. In Perak there were two schools exclusively for girls and these were run by Roman Catholic missionaries.

No fees are charged in Government and Estate schools but in some of the schools run by private bodies the pupils pay. There is usually an arrangement in such schools whereby poor children pay little or nothing. Government schools and private aided schools generally produce better work than the average estate school, but on estates where the labour force has been settled for years the standard of the work is as good as in town schools.

There is no provision in Malaya for the training of Tamil teachers.

The rate of grant-in-aid has been raised from $6 to $8 per pupil per year as from 1st July, 1935.

F.—Recreation, Music, Art and Drama.

Recreation.—Every encouragement was given to pupils to participate in school games. In almost all English boys' schools the maximum amount of games and organised sports, normally of the "team" variety, is provided. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket grows more and more popular. Football (association), hockey, volley ball, basket ball, tennis and badminton are played at most schools. Rugby football is played and gymnastics provided at some of the bigger schools.

In all English girls' schools, as in boys' schools, drill and games are now compulsory. Some girls' schools play basket ball and have tennis and badminton courts.

Physical training reaches a good standard in Malay boys' schools, and association football, encouraged by inter-school competitions, is much indulged in.

Music.—Music is taught in all Convent schools and occasionally elsewhere. Singing is taught in the lower forms of all schools. Most schools have gramophones and a few have pianos. Cadet Corps and a few Scout Troops have their own bands.

Handwork and Art.—Handwork is taught under the supervision of trained European mistresses in the primary and elementary departments. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, clay and plasticine modelling, cardboard modelling, stick-laying, bead-stringing, paper flower making, raffia work and wool-work. All English girls' schools teach needlework; a very high standard is generally attained.

Improvements were made in each craft during the year in the craft school of the Sultan Idris Training College. In pottery the former earthenware technique was abandoned and nothing but stoneware is now made. The glazes are made from local materials, even to the colouring matters. The advantage of the change is in the increased durability of the ware produced and a finer type of glaze is also possible. In cotton-printing, apparatus for new methods of printing and dyeing was installed and in addition to the usual direct print, discharge prints and wax resists in the Javanese style were made. A new type of students came during the year. These were boys specially picked to be trained as craftsmen. One each came from Kedah and Pahang.

Drama.—The drama forms part of the English curriculum of all English schools. The lower standards act simple plays and dramatic stories. The senior boys and girls perform scenes from Shakespeare.

The celebrations in connection with the Silver Jubilee of the anniversary of His late Majesty's accession to the throne left an indelible impression on the children. The girls and boys were given an important part in the celebrations and enjoyed to the full all the festivities of the Jubilee week.

CHAPTER X.

Communications and Transport.

POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

Posts. During the year under review the continued improvement in general trade conditions had its effect on the volume and value of business transacted by the Posts and Telegraphs Department and the increased work threw a heavy burden on a staff whose numerical strength remained much below the number employed prior to the slump period of 1931-1933.

There are now 100 Post Offices at which officers of the department are employed and 72 agencies at which postal business is performed by the Customs Department's clerks, station masters and others who act as postal agents. In addition there are 167 persons licensed to sell stamps.

The postal agency at Tanah Rata (Cameron Highlands) was replaced by a post office on the 20th December, 1935, and new postal agencies were opened at Telok Anson wharf and Benta (Pahang) on the 1st February and 20th November, 1935, respectively.

On the 1st May, 1935, a travelling postal agency known as the *Tebing Tinggi* Agency, was established on a launch running on the Pahang River between Jerantut and Burau, providing a daily service to the riverine mukims en route.

New premises housing the Post Office and an up-to-date automatic telephone exchange were opened at Gopeng on the 3rd June, 1935, the site of the old building on a hill overlooking the town having been acquired for tin mining purposes.

At the close of the year there were 312 posting boxes in use exclusive of those installed at Post Offices and postal agencies.

In the course of the year 464 licences for the collection of letters for transmission to China under the Clubbed Packet System were issued. Under this system certain Chinese shopkeepers are privileged to send to China a number of letters bundled together in a single packet. These letters comprise advices of remittances sent by Chinese immigrants in Malaya to their dependents in China. The shop-keeper receives the money and advises his agent in China by letter of the amount, in local currency, remitted and to whom the money is to be paid.

The most interesting development in the air mail services of Malaya during 1935 was the introduction on the 3rd October of an additional service by Imperial Airways to and from Great Britain and intermediate countries. This afforded a regular twice-weekly service leaving Singapore and Penang each Sunday and Thursday morning.

The twice-weekly service for specially superscribed correspondence for the Netherlands air service to Amsterdam and London continued to operate but the times of despatch from Singapore, i.e., Wednesday and Saturday afternoons clash to some extent with the departures of the Imperial Airways services.

The hopes entertained in 1934 that the "air mail habit" would become more general were to a large extent realised. The biggest air mail despatched from this country is that to London by Imperial Airways and the following particulars regarding that mail will give some indication of the general growth in air mail traffic. The average weekly weight which in January was about 210 lbs. steadily grew until by the end of November it reached 332 lbs. The exceptionally heavy Christmas and New Year air mails despatched to London during the three weeks ending the 21st December totalled 1,536 lbs. compared with 869 lbs. during the corresponding three weeks of 1934.

Money orders.

Money Order business is transacted at all Post Offices and at certain postal agencies and during the year 297,600 money orders to the value of $12,689,072 were issued and paid, representing an increase of 22,417 in number and $1,995,713 in value over 1934 figures. Telegraph money orders included in the main 1935 total amounted to 16,481 in number and $1,504,390 in value.

Savings bank.

The number of depositors in the Federated Malay States Government Savings Bank on the 31st December, 1935, was 67,840 as compared with 60,005 on the 31st December, 1934, representing an increase of 13 per cent. During the year 15,447 new accounts were opened while 7,612 accounts were closed.

The amount standing to the credit of depositors on the 31st December, 1935, was $7,578,619 as compared with $6,592,089 on the 31st December, 1934. The average amount standing to the credit of each depositor was $111.71 as compared with an average of $110 per depositor in 1934.

There were 47,327 withdrawals on demand during the year as against 39,015 in 1934 and 434 withdrawals by telegraph as compared with 318 in 1934.

Telegraphs.

The number of postal telegraph offices in the Federated Malay States is now 103.

During the year the new service indication "Nuit" was introduced, denoting that telegrams received for delivery after 10 p.m. are to be delivered forthwith, subject to the limitations imposed by the working hours of the offices of destination. In the normal course, telegrams not bearing this indication are only delivered after 10 p.m. if they are recognised by the office of destination to be of an urgent nature.

For the occasion of the Jubilee celebrations a special letter telegram service between Malaya and the United Kingdom was introduced for the period 4th to 11th May at considerably reduced rates and the service was fairly well supported by the public.

The service of Inland Greeting Telegrams conveying a standard greeting at a fixed rate of 25 cents per telegram, has met with a promising degree of success in its initial stage.

Since the introduction of the service on the 17th December, 1934, the numbers of telegrams handled were as follows:

English Forms—	
Christmas, 1934, and New Year, 1935 ...	741
Christmas only, 1935	668
Malay Forms—	
Hari Raya Puasa, January, 1935	407
Hari Raya Puasa, December, 1935 ...	148
Chinese Forms—	
Chinese New Year, February, 1935 ...	371
Indian Forms—	
Deepavali—October, 1935	60

Satisfactory teleprinter (telegraph) working was maintained on the main telegraph circuits throughout the year and in continuation of the policy to eliminate morse working, the following morse circuits were converted to telephone-telegram working:

1. Kuala Lumpur-Klang.
2. Kuala Lumpur-Railway Station, Kuala Lumpur.
3. Ipoh-Kuala Kangsar.
4. Ipoh-Tapah.
5. Taiping-Bagan Serai-Parit Buntar.

Telephone-telegram facilities were also introduced between Kroh, Intan and Baling.

The total number of telegrams sent and received in the course of the year was 401,454 a decrease of 1 per cent. compared with the 1934 figures.

The total value of telegraph business including Government messages sent free of charge increased from $151,402 in 1934 to $173,519 in 1935 which represents an increase of 14.6 per cent.

Railway telegraphs and allied services.

The Federated Malay States Railway Department's telegraph, telephone, block and tablet signalling systems and other miscellaneous apparatus were maintained satisfactorily throughout the year under the supervision of the Posts and Telegraphs Department's Engineers.

Development work carried out in the course of the year included the replacement of cables carrying railway signal wires across the Johore Causeway by overhead wires, provision of a 25-pair underground cable between the "North" and "South" signal cabins at Kuala Lumpur in connection with track circuit working; and the replacement of 359 wooden poles made from old rails.

Telephones.

The number of telephones in service continues to increase and at the end of the year under review 4,223 direct exchange lines were connected to the Federated Malay States telephone system as compared with 4,040 at the end of 1934. Miscellaneous electric signalling equipments such as fire alarms and private bells are also rented to the public by the department and the number of such items in use at the close of the year was 511.

The nett revenue derived from telephones during the year was $1,068,980, an increase of $55,912 over 1934. Included in the former sum is $422,638 derived from trunk and junction services, representing an increase of $25,421 over the previous year.

The department now maintains 80 telephone exchanges for public service. There are three general types namely—

(*a*) Fifty-nine Manual Exchanges. All switching at these exchanges is performed by operators.

(*b*) Fifteen full automatic exchanges. Subscribers connected to these exchanges obtain their own local connections by dialling, and have access to an operator (usually at a remote exchange) for trunk and junction calls.

(*c*) Six semi-automatic exchanges. Connections on these exchanges are set up by an operator at a remote exchange, to which the apparatus routes all calls. Subscribers are not provided with dialling devices and this type of working is practicable only at very small exchanges up to 10 lines.

Automatic telephone systems, which have attained a high degree of development in Europe and in America, are gradually being introduced in this country also, but caution has been necessary owing to climatic conditions and the need for training technical staff in advance. The largest automatic exchange under the control of this department is at Kuala Lumpur and has now been in service for about 4½ years and, during that time, continuous attention has been given to the training of staff and to the evolution of procedure for the prevention and detection of faults. Excellent results are being obtained. Faults on the automatic exchange apparatus have decreased from an average of 8½ per day during the first complete calendar year of its life to 1½ per day during 1935. Faults occurring outside the exchange have also been lower during 1935 than in any of the previous years. These decreases are due partly to increasing skill of staff and partly to many small improvements that have, as the result of experience, been introduced.

During the year six new telephone exchanges were provided to open up service in rural areas. Of these four were full automatic, one semi-automatic and one manual. Two semi-automatic exchanges were replaced by full automatic exchanges owing to growth in the number of lines and three obsolete manual exchanges were replaced by full automatic.

The rural automatic type of exchange catering for 25 to 100 lines has proved very satisfactory and reliable in service. Its utility will be still further increased shortly owing to the inclusion in equipments now on order, of facilities for dialling numbers on remote exchanges, and for dialling through one exchange of this type to another connected "in tandem". This facility will in many areas effect a considerable saving in cost of junction circuits. The point is illustrated by the case of Cameron Highlands and Ringlet which are 8 miles apart and 40 and 32 miles respectively from their "parent" exchange at Tapah. Under present conditions it is not economic to provide separate exchanges for these places as each would require at least two junction circuits to Tapah. With the "tandem" facility, however, it will be possible to instal two separate automatic exchanges with dialling from one to the other, and with access to Tapah over a common group of junction. Two junctions only, as already exist, will suffice initially between Ringlet and Tapah.

Owing to the opening of the new exchanges mentioned above, and to general increase of traffic it was necessary to provide the following trunk and junction circuits during the year:

Tapah-Cameron Highlands	1 channel
Tapah-Pondok Tanjong	1 ,,
Ipoh-Pulai	2 channels
Ipoh-Gopeng	1 channel
Ipoh-Malim Nawar	1 ,,
Tanjong Malim-Slim River	2 channels
Tanjong Malim-Kuala Kubu	1 channel
Klang-Batu Tiga	2 channels
Klang-Kuala Lumpur	1 channel
Tampin-Batang Malaka	1 ,,
Port Dickson-Si Rusa	2 channels
Seremban—Si Rusa	2 ,,
Seremban-Kuala Pilah	1 channel
Parit Buntar-Bandar Bahru	1 ,,
Kroh-Baling	1 ,,

On the 1st July, 1935, the rates for trunk calls booked after 9 p.m. were reduced from one half to one quarter of the rates for calls made during the "day" period 7 a.m. to 7 p.m. The objects of this concession were (*a*) to encourage the use of the long distance trunk services at night when there are normally very few calls made and (*b*) to relieve the pressure on long distance lines during the "peak" hours. The response to the concession has been encouraging although not spectacular.

Radio-telephone services are now in operation between Malaya and—

(*a*) Java, Madoera and Bali.
(*b*) Philippine Islands. Zones I, II and III.
(*c*) North Sumatra.
(*d*) Macasser (Isle of Celebes).
(*e*) Siam (Bangkok only).

The last three services were introduced during the year.

So far little use has been made of these radio services, 143 calls only being made during the year under review. This may be due to the lack of secrecy as conversations can at present be overheard by owners of broadcast receiving sets. This defect will be corrected during 1936 when new radio-link terminating equipment will be installed and this equipment will include the apparatus necessary to provide for secrecy of conversations.

Preliminary arrangements have been made for a radio-telephone service from Malaya to Great Britain and other European countries via Java and it will probably be possible to commence this service during 1936. The rates for communication have not yet been definitely fixed, but it is anticipated that a three minute conversation will cost between $50 and $60.

Wireless.

The Petaling Hill transmitting station and the Kenny Road receiving station situated in Kuala Lumpur maintained satisfactory wireless services and operated efficiently throughout the year under review.

Short-wave working was maintained between Petaling Hill and the wireless stations in Pahang, Kelantan and Upper Perak and 43,406 messages were dealt with as compared with 38,478 in 1934 representing an increase of 12.8 per cent.

Aeronautical services were operated from Petaling Hill and there was a large increase in the number of hours of watch and of messages handled in the course of the year. This was chiefly occasioned by the duplication of the services maintained by Imperial Airways and the Netherlands Air Line.

A large increase has taken place in the wireless work undertaken in connection with meteorological services and meteorological bulletins broadcast by adjacent countries were received at Petaling Hill to enable the Meteorological Department to prepare synoptic weather charts and forecasts.

During complete interruptions to landline communications telegraph traffic was handled by wireless between Singapore, Kuala Lumpur and Penang. These emergency services were operated on 94 occasions and 1,496 messages were dealt with.

Particulars of radio-telephone services operated from Petaling Hill appear under the section relating to telephones. Radio-telephony tests with Saigon in French Indo-China were made successfully during the year and it is hoped to commence a service during 1936.

Broadcasting was carried out from the Petaling Hill Wireless Station by the Malayan Amateur Radio Society and programmes were radiated three times a week.

The number of Broadcast Listeners Licences in force at the end of the year was 1,589 as compared with 769 in 1934 and 65 wireless dealers were licensed during the year as compared with 48 in 1934.

With the increase in the number of listeners, a corresponding increase in the number of complaints of electrical and oscillation interference occurred and 89 complaints were investigated.

The majority of these complaints originated in, or close to, areas served by direct current electricity supplies where fans, refrigerators, hair dryers and other apparatus using small electric motors were found to be the source of interference.

Financial.

The nett revenue collected during 1935 by the Posts and Telegraphs Department in the Federated Malay States was $2,398,965, an increase of $124,457 compared with 1934. Annually recurrent charges including Personal Emoluments amounted to $2,331,386 against $1,923,095 in the previous year, an increase of $408,291. Special expenditure amounted to $129,430 as against $122,095 in 1934. These revenue and expenditure figures do not include the value of services rendered free of charge by or to the Posts and Telegraphs Department.

RAILWAYS.

The Federated Malay States Government owns the railways both in the Federated Malay States, the Straits Settlements (Singapore Island, Malacca, Province Wellesley) and the Unfederated States of Kedah, Perlis and Kelantan. It has leased the Johore State Railway (121 miles) extending from Johore Bahru at the southern extremity of the Peninsula opposite Singapore Island to Gemas on the boundary between Johore and the Federated Malay States. A causeway carrying the railway and a roadway across the Johore Straits connects the Island of Singapore with the mainland. At Gemas the line branches into the west and the east coast lines.

The west coast line runs north-north-west through Negri Sembilan, Malacca, Selangor, Perak and Province Wellesley to Prai—the port opposite Penang harbour about 488 miles from Singapore. From Bukit Mertajam, seven miles from Prai, the line proceeds through Province Wellesley and the Unfederated States of Kedah and Perlis to the Siamese frontier station of

Padang Besar, 580 miles from Singapore. Through traffic with the Royal State Railways of Siam was opened on the 1st July, 1918, the distance between Singapore and Bangkok being 1,195 miles.

The east coast line proceeds northwards from Gemas through Negri Sembilan, Pahang and Kelantan terminating at the port of Tumpat. The length of the line is 328 miles and provides an alternative route to Siam from Singapore. A branch line 11¾ miles long from Pasir Mas in Kelantan to the Golok River at the Siamese boundary connects with the Siamese line running to Haad Yai Junction, 145 miles distant, the junction for the main Bangkok-Penang-Singapore line. Through working between the Federated Malay States and Kelantan via the Royal State Railways of Siam commenced on 1st November, 1921, and via the east coast line on 6th September, 1931.

Branch lines connect the main line with the ports of Malacca, Port Dickson, Port Swettenham, Teluk Anson wharf and Port Weld all on the west coast.

Other branch lines are Ipoh-Tronoh, 15 miles, in Perak; and Kuang-Batang Berjuntai, 14 miles; Kuala Lumpur-Batu Caves, 8 miles; Sungei Besi-Sultan Street, 8 miles; and Sultan Street-Ampang, 6 miles, all in Selangor.

The total length of line (first track) now open to traffic under the Federated Malay States Railway Administration is 1,068 miles. The line is of metre gauge.

The day and night mail trains running between Singapore and Prai (for Penang) are provided with restaurant or buffet parlour cars and sleeping saloons.

There are 213 permanent stations and 77 flag stations.

Financial. The expenditure on Capital Account amounted to $235,249,526 on 31st December, 1935, of which $49,834,323 was met from Loan Funds, $183,382,402 from Revenue Advances and $2,032,801 from Railway Revenue.

The receipts in 1935 from all sources were $11,871,097, an increase of 5.20 per cent. compared with 1934. Expenditure chargeable to Revenue Account excluding Renewals Fund contribution amounted to $10,097,340, an increase of 4 per cent.

The receipts from all sources were $1,773,757 more than the total expenditure on all services and this sum has been transferred as part contribution to the Railway Renewals Fund.

Capital expenditure.

During the year, expenditure on Capital Account was $99,270 compared with $17,540 in 1934. A reduction of $137,952 has been made in the Capital Account representing the value of retired assets.

Renewals Fund.

The nett expenditure from the Railway Renewals Fund during the year amounted to $737,683 compared with $435,883 in 1934. The balance standing to the credit of the Fund at 31st December, 1935, was $8,514,238, the corresponding figure at 31st December, 1934, being $7,478,164.

Passenger train traffic.

The receipts from passenger train traffic amounted to $4,431,386 compared with $3,958,677 in 1934, an increase of $472,709 (11.94 per cent.).

Goods train traffic.

The receipts from goods train traffic amounted to $5,269,786 compared with $5,256,109 in 1934, an increase of $13,677 (0.26 per cent.).

Road motor transport service.

The receipts from road motor collection and delivery services amounted to $160,148 compared with $144,219 in 1934, an increase of $15,929 (11.04 per cent.).

Miscellaneous services (docks, ferries, rents, etc.).

Miscellaneous services produced receipts to the amount of $2,009,777 during the year compared with $1,925,142 in the previous year, an increase of $84,635 (4.40 per cent.).

Railway Board.

The Railway Board, composed of four official and six unofficial members, held three meetings during the year, but considerable matter was dealt with by circulation of papers.

ROADS.

The road system of the country comprises a total of 2,900.94 miles of which 1,967.95 miles, or 68 per cent., are bituminously treated in one form or another. Increased funds for maintenance were provided in 1935 in all States and, although this enabled a start to be made in making good some of the arrears, much still remains to be done to restore the roads to the state of efficiency required to meet the demands of modern traffic.

The total mileage of metalled and gravelled roads upkept from Annually Recurrent Expenditure at a cost of $2,004,510 was 2,901.77, and this includes 1,985.65 miles or 68 per cent. bituminously treated. The cost per mile was $691 as compared with $566 in 1934. The mileage of unmetalled roads and bridle-paths maintained was 1,657.69.

It is to be remembered that a large proportion of the roads in Malaya were laid out for bullock or horse vehicle traffic when consideration of gradient was of primary importance and alignment was a secondary matter. The advent of mechanical transport has altered this, however, and though annoyance may be felt at the apparently poor alignment of some of the roads motorists might nevertheless admire the ingenuity of the engineers and surveyors who had to lay out the roads in dense jungle to a gradient not exceeding one in forty (1 in 40).

The main trunk road from Penang to Singapore has a bituminously treated surface throughout and for the major portion of the way is a good motor road.

SHIPPING.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during the last three years were as follows:

	No. of vessels.	Tons.
1933	2,666 ...	5,863,698
1934	2,873 ...	6,378,361
1935	2,865 ...	6,650,985

The number and tonnage of ocean-going steamers entered and cleared at this port were as follows:

	No. of vessels.	Tons.
1933	1,690 ...	5,358,614
1934	1,869 ...	5,882,621
1935	1,945 ...	6,165,547

The number of ocean-going steamers which came alongside the wharf was 334 as against 307 in 1934. The largest vessel entering the port was s.s. "Philoctetes" (British) of 11,446 tons. The deepest draft vessel entering the port was s.s. "Diamed" (British) drawing 31′ 1″ of water.

The following table shows the nationality, number and tonnage of ocean-going merchant vessels entered and cleared at Port Swettenham during the year 1935:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American	12	43,425	12	43,425	24	86,850
British	629	2,234,327	632	2,239,834	1,261	4,474,161
Danish	45	165,480	45	165,480	90	330,960
Dutch	107	197,437	107	197,437	214	394,874
French	1	1,132	1	1,132	2	2,264
German	40	184,562	40	184,562	80	369,124
Italian	1	3,651	1	3,651	2	7,302
Japanese	30	130,332	30	130,332	60	260,664
Norwegian	93	103,600	93	103,600	186	207,200
Siamese	11	8,113	11	8,113	22	16,226
Swedish	2	7,961	2	7,961	4	15,922
	971	3,080,020	974	3,085,527	1,945	6,165,547

A reduction of 10 per cent. on all pilotage fees was in effect until the 31st July and of 5 per cent from the 1st August to 31st December, 1935.

AIR SERVICES.

The aeroplane landing ground, Taiping, continues in very good condition and was used by 184 aircraft during the year, more than double the number for 1934.

The construction of an emergency landing ground 1,000 yards by 300 yards at Simpang Ampat near Lumut was put in hand and the earthwork practically completed during the year. $22,329 was expended.

Provision of $75,000 was made during the year for the construction of a landing ground at Ipoh, and although operations were not started till August the earthwork had been brought to formation level and sub-soil drainage had been completed by the end of the year, whilst the approach road, one mile in length, and quarters for the resident labour force were in hand.

The ground consists of an "L" shaped area with landing runways 700 yards by 200 yards, and 600 yards by 300 yards respectively.

The newly formed Perak Flying Club will use this ground as a base of operations and has in hand the construction of a club house and hangar.

The Kuala Lumpur Aerodrome has been continually used during the year by machines of the Kuala Lumpur Flying Club and occasionally by Royal Air Force planes. In March, Lord Sempill paid a visit to Selangor and inspected possible aerodrome sites. Considerable work has been done on reconditioning a strip of ground 600 yards long by 180 yards broad, in order that the aerodrome should be fit to receive all types of aircraft. Work was proceeding on this strip at the end of the year. At Port Swettenham no work was done during the year, but a proposal to develop this aerodrome by constructing two runways which will make it suitable for all types of aircraft was approved and it is probable that the improvements will be finished before the middle of 1936.

The Kuantan River is suitable for the alighting of seaplanes, and flying boats from Singapore have already on occasions alighted there.

CHAPTER XI.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—6 branches.

Hong Kong and Shanghai Banking Corporation—2 branches.

The Mercantile Bank of India Limited—4 branches.

There are no agricultural or co-operative banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under Enactment 16 of 1921 the standard weights and measures are:

(i) The Imperial standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns	=1 chi
10 chi	=1 tahil (1⅓ oz.)
16 tahils	=1 kati
100 katies	=1 pikul (133⅓ lbs.)
40 pikuls	=1 koyan

CHAPTER XII.

Public Works.

Of the authorised provision of $5,876,787 the total expenditure was $5,481,200, the difference being accounted for by savings effected as follows:

(*a*) Annual Recurrent	$ 77,030
(*b*) Other Charges and Special Expenditure ...	23,377
(*c*) Special Services:	
Loan and Revenue	295,180
	$395,587

For other departments work to the value of $93,029 was carried out bringing the total expended by the Department to $5,574,229.

The total expenditure of $5,481,200 from Departmental votes was made up as follows:

(*a*) Annual Recurrent	$3,777,965
(*b*) Other Charges and Special Expenditure	196,747
(*c*) Special Services	1,506,488
	$5,481,200

The comparative percentages of expenditure to authorised provision in 1935, 1934 and 1933 were as follows:

	1935.	1934.	1933.
(*a*) Annual Recurrent	98	95.5	93.1
(*b*) Other Charges and Special Expenditure	89.4	84.0	84.0
(*c*) Special Services	83.6	47.3	88.0

With the funds available buildings were maintained in as good a state of repair as possible, the percentage of upkeep cost on the estimated value of buildings being 0.995 cent compared with 0.863 cent in 1934. Building maintenance especially painting has been getting steadily in arrears during the past few years due to the inadequate provisions available but, generally speaking, the slightly increased funds in 1935 have prevented further accumulation of work overdue. Although structurally buildings have for the most part been kept in repair, a considerable sum of money will be required before all Government buildings can be brought up to the standard generally required.

The removal and re-erection of Government Buildings at Gopeng in the State of Perak necessitated by the mining operations, the funds for which were provided by a payment to revenue by a mining company, was successfully completed during the year. The layout of the new buildings was done with considerable care and resulted in an improvement to the town.

During the year further buildings were constructed for the Malay Regiment, Port Dickson, the works including two Barrack Blocks, Quarters for Officers, Rifle Range, Parade Ground, etc., together with provision of water supply and sanitary and electric installations. Under Buildings, Special Service works other than the foregoing were of a minor nature.

Waterworks have been maintained in an efficient manner throughout the year and no serious shortage of water occurred. Bacteriological and chemical analyses have been made regularly in order to ensure that the quality of the water is maintained, a number of supplies being submitted to chemical treatment.

The New District Water Supply at Telok Anson was completed during the year, the work being the continuation and conclusion of the remodelling of the pumping station and filtration plant. The plant which is now of two million gallons per diem rated capacity is a very good example of modern water works construction.

The experimental plant at Pulau Tiga on the Perak River which has as its object the supply of potable water from a highly polluted river to a riverine population has worked with efficiency throughout the year, and its purification results are very satisfactory considering the simplicity of the processes and the absence of any skilled operators. Time and education however will be needed to induce the local inhabitants to make use of it for purposes other than washing their feet, the while they carry drinking water from the river.

A report on the construction and maintenance of landing grounds will be found under the caption "Air Services" on page 85.

DRAINAGE AND IRRIGATION.

Krian Irrigation.—The Krian Irrigation Works were satisfactorily maintained during the year at a cost of $59,582 and embraced the upkeep of:

48½ miles of canals;
252½ ,, distributaries;
261 ,, drains;
283 water gates and regulators;
103 syphons; and
68 miles of bund.

Exceptionally heavy rainfall in October caused considerable flooding, but growth was well advanced and no damage to crops occurred.

The total area cultivated during the 1934-35 season was 49,019 acres; 176,335 gantangs of seed were sown yielding 19,278,960 gantangs of padi—over a hundred-fold. The average crop per acre was 393 gantangs, and the maximum yield 524 gantangs per acre obtained in the Bagan Tiang and Tanjong Piandang districts (12,047 acres).

Work proceeded apace on the Krian Irrigation Extension Scheme which provides for increased supply of irrigation water by diversion of the waters of the Sungei Ijok to the Bukit Merah Reservoir thereby making possible the extension of irrigation to some 4,550 acres of existing padi land in Province Wellesley; the irrigation of a new area of about 3,000 acres near the coast and an area of approximately 750 acres near Bukit Merah and also the general improvement in supply to the whole of the area comprised in the existing schemes. The total cost of the scheme is $375,000, borne in equal shares by the Government of the Straits Settlements and by Perak. Work commenced in 1934 and is spread over a three-year programme; the expenditure in 1935 was $105,200 out of a provision of $122,500.

During the year under review, activities were concentrated on the enlargement of the canal between Bagan Serai and Titi Serong: this involved the construction of 17 miles of embankment and the raising of the right bank from Bagan Serai to Panchor Regulator, a distance of about 3¼ miles, the work being accomplished by two mechanical excavators. The canal banks downstream of the 13th mile post were completed by hand to Regulator 218 where the new Sungei Acheh canal to boundary road takes off, thus enabling water to be supplied for the first time to the Acheh area in Province Wellesley.

Three syphons were installed under the Coast Road thus completing the programme of ten to bring water to the revoked Kurau Forest Reserve; two water-gates were also built, bringing the total to 8 out of a programme of 10. All the distributary and drain extensions from the new syphons and water-gates in this section were completed; distributary extensions amounted to 559 chains including the excavation of 28,335 cubic yards, and drain extensions to 37,912 cubic yards of earthwork. The area was declared an irrigation area and plans were in hand for the settlement of the 605 acres between Sungei Bakau and Tanjong Piandang.

Repairs were carried out to Padang Lallang syphon by pressure grouting. Pipes were plugged into the concrete walls where damp spots and leaks occurred; the pipes were connected to a grouting pump and cement grout forced in to refusal. The walls were uncovered down to foundation level and all leaks and signs of leaks grouted in.

A feature of all this work on canal bank raising and extension is that it was undertaken without any interference with irrigation, and the earthwork on canal banks, carried out in the irrigation season by mechanical excavators, was done under water.

The construction of the new canal to carry the waters of the Ijok River to Bukit Merah Reservoir commenced in the latter part of February. The canal takes off at Batu Glugor Kramat about 2 miles beyond Redang Panjang Village and for the first two miles traverses kampong land, mostly under rubber. The remainder of the route is in virgin jungle to Klian Merah where it crosses the divide into the Merah watershed. Clearing of the reserve began in February on the first 2-mile section from the intake, and 24.36 acres were cleared and stumped. A mechanical excavator which was transported by road to the site worked on the canal excavation towards the headworks. The earthwork completed amounted to 24,948 cubic yards which represents 77 per cent. of the first 2-mile section. The last 1,000 feet to the intake was mostly through an old river bed of sand and débris.

A mechanical excavator was employed on the construction of the Krian coastal bund and 340 chains, or about one-third of the bund, was finished by the end of the year; progress was not as fast as originally anticipated as the amount of material dumped from borrow pits was 50 to 100 per cent. in excess of that required to make up for losses due to shrinkage and settlement.

The new spillway at Bukit Merah was successfully completed during the year: it replaces the old spillway which for years had been a source of constant anxiety. The new gates are the first of their kind in this country and consist of a double storey roller sluice gate having a maximum discharge of 5,500 cubic feet per second. The work was carried out expeditiously in order to coincide with irrigation requirements: it was commenced in February and by working day and night shifts, the sluices were put into commission by August in time for the approaching flood season. The excavation in hard shale amounted to 31,182 cubic yards and the filling to form a strong embankment over the old spillway contained 29,182 cubic yards of selected material. The total concrete in the work amounted to over 1,500 cubic yards.

Sungei Manik Irrigation Scheme.—In the Sungei Manik area, irrigation water is now available on 6,300 acres; about 4,430 acres were alienated and approximately 2,900 acres planted with padi during the 1935-36 padi season. The scheme operated successfully and irrigation was entirely successful. Good crops averaging 500 gantangs per acre are expected from the old area, and 250 gantangs per acre from the newly-felled and partially cleared areas. Seven thousand two hundred and thirty dollars were spent on maintaining the works during the year; maintenance is done whenever possible by task work, and the maintenance force is entirely Malay, recruited from amongst residents in the irrigation area. Three patrol watchmen were trained during the year for vacancies in 1936.

An Advisory Committee has been appointed to co-ordinate the efforts of all officers in Lower Perak interested in the scheme, to exercise certain statutory powers and to report and make recommendations concerning more important matters to the Perak Drainage and Irrigation Board.

Construction work on the first and second stages of this area proceeded very satisfactorily. At the first stage area, the construction of small distributaries was accelerated in readiness for the irrigation season and several minor improvements to the scheme were effected. Work proceeded rapidly in the second stage area; the use of a dragline excavator ensured completion of the Upper Batang Padang bund and consequently dried out the area behind the bund, facilitating work on the main and distributary irrigation canals. In spite of the continuously flooded state of the Batang Padang since the middle of August, 156,000 cubic yards of earthwork were completed during the year.

The second stage intake and headworks distribution weirs were completed and a contract was let in December for the construction of distributary off-takes and canal control drops.

Pumping Scheme, Riverine Areas. Lower Perak.—The First Pumping Scheme at Bota and Lambor Kanan in Lower Perak, was completed during the year. The scheme is unique. Pumped water is delivered into a canal, 11 miles long, to irrigate some 16 areas of padi interspersed between kampongs; the areas vary in size from 400 to less than 20 acres and comprise in all some 2,000 acres already in cultivation and 500 acres of potential padi land. The canals were cut largely during 1934 and the early part of 1935 was devoted to the installation of the pumping plant. Pumping was commenced in July and the pump was kept running practically continuously until 19th December. A lavish supply of water was given and the prospective crop is greatly in excess of anything formerly obtained. The arrival of water expelled former doubts in the minds of the cultivators and gave them confidence in the works, but planting was late and occupied a long period.

During the year a permanent dam was constructed on the Sungei Bruas and 5 permanent drops provided in the main supply channel which was regraded and improved to serve an existing area of 340 acres with possible extension to 1,000 acres. A major handicap has thus been removed from the rayats occupying this area, for increasing difficulties were being experienced each year to fix and maintain the temporary dam. The area has been declared to be an irrigation area to be known as the Bruas Valley Irrigation Area.

Controlled Drainage Scheme, Panchang Bedena Padi Area.—The controlled drainage scheme for Panchang Bedena of 17,000 acres which was started in 1932 was all but completed at the close of the year. The scheme comprises 4 main gates and 20 subsidiary gates. The area is divided into 17 drainage units; an internal gate is provided for the independent control of the water table in each unit. The amount spent during the year was $17,930, bringing the total cost of construction to the end of the year to $248,381. From 200 to 300 local men have been employed throughout the time, principally on bund and drain construction and the wages thus earned have been a useful source of ready money in assisting the settlers to open up their land. Approximately 10,300 acres have been cleared by the cultivators of which 7,700 acres have been planted this year.

The Beranang Padi Area comprises the valleys of the Sungei Beranang and the Sungei Sempoh from the main trunk road upstream to the State boundary and downstream to the junction of the Sungei Beranang with the Sungei Semenyih. It is approximately 1,004 acres, practically the whole of which is under cultivation by means of temporary brushwood dams which, owing to the silting of the river, cause serious flooding with consequent destruction of crops. These dams are being replaced by a permanent dam on the Beranang near the State boundary. The construction of the dam, syphon and drops was started in April. The whole work was completed by the end of the year except the construction of two drops in the *tali ayer* downstream of the road which could not be put in hand on account of the growing padi.

The Kuang Padi Area which is situated at the 18th mile from the Sungei Buloh-Kuang Road in the district of Ulu Selangor comprises about 300 acres of padi land and was irrigated by means of a timber dam. Owing to the expensive repairs that were found necessary for this dam, a supplementary warrant for $6,500 was approved at the end of 1934, and a permanent dam was constructed in 1935. It was handed over to the local headman to operate and maintain.

Sungei Muar Valley Irrigation.—After further investigation of the valley of the Sungei Muar from Kuala Pilah down to Kuala Sungei Jempol, it was decided to abandon the original scheme of operating a pumping plant in favour of the construction of a dam across the Sungei Muar with gravity feed canals along the flanks of the valley. A suitable site for a dam was selected about 1½ miles below Kuala Pilah where the river flows close against a spur of high ground on its left bank and from which two supply channels, one following the right and the other the left edge of the valley, will command an area of 1,400 acres out of a total of 1,800 acres of sawah land. A contract for the dam was let in September and by the close of the year satisfactory progress had been made on the construction of the foundations and the fabrication of the lift gates.

The construction of a concrete dam on the Sungei Batang Labu to irrigate 560 acres of sawah near Labu Village was completed in November. The scheme includes the main irrigation channel 5½ miles long down the left flank of the valley and is provided with 7 syphons for cross drainage and 5 branch *tali ayer* each of which is syphoned under the Sungei Labu to supply the sawah on the right bank. The dam and first 3 miles of the main *tali ayer* were completed by June and irrigation was turned on to the upper part of the area. The area was previously irrigated by numerous brushwood dams which seriously jeopardised drainage and caused severe flooding. Only two brushwood dams remained at the end of the season and with their complete removal, it is expected that the river will in time recover its original capacity as a drain.

A new concrete dam and off-take, and 10 notch falls for the regulation of the main *tali ayer* were completed at Kampong Daching at a cost of $6,300. The earthwork of the *tali ayer* is to be done by the cultivators themselves and a start on the right bank has been made. The right bank *tali ayer* is designed to irrigate an area of 160 acres and the left bank *tali ayer* an area of 190 acres. The new dam will take the place of no less than 6 brushwood dams.

At Kuala Klawang a concrete dam and new *tali ayer* with 4 notch falls, one off-take and a timber flume have been constructed at a cost of $6,000. The work was completed too late for the padi season. Although the area at present served by the *tali ayer* is only 115 acres, it has been excavated to a size large enough to supply an additional 500 acres, to provide for future extensions.

The construction of a permanent dam on the Sungei Batu Hampar to irrigate an area at Mampong of approximately 160 acres of existing and abandoned sawah was started at the end of 1934 and completed in time for the 1935 planting season. The new dam supersedes 3 or 4 brushwood dams. Below both syphons are areas of old sawah abandoned because of the difficulty of maintaining brushwood dams; the areas have this year been planted with padi for the first time in, it is said, 15 years. As at Gadong, the reconstruction of the *tali ayer* was left to the cultivators as is usual in all these cases; but close supervision by the department was necessary to achieve results. It is however satisfactory to record that such works have been accomplished by the cultivators themselves.

Paya Besar Padi Area.— To permit of further development of the Paya Besar padi area a sum of $20,000 was provided in the 1935 Estimates for the construction of an irrigation canal from the Sungei Pandan. Borings taken along the original line chosen for the main canal shewed the ground to be definitely unsuitable for carrying water so that further investigations had to be carried out and in all 147 bore holes were put down before it was possible to obtain a suitable location. Owing to these delays in the investigation it was not until the beginning of September that the contract for the excavation was let.

Approximately 106 chains of the main canal were completed representing about 60 per cent. of the work; 103 chains of drain were cut and 21 chains of bund completed.

Planting this season has shewn a definite improvement. The land is as yet still under temporary occupation licence and an effort was made to keep all the planters together and some 450 acres of land were planted out of a total of 530 temporary occupation licences issued against 383 acres last season.

At Padang Kangsar in Lipis district, work was continued from last year on the Pulau Tawar earth dam, 28 feet high. Owing to the nature of the ground not being as expected according to the bores taken the foundations of the puddle core had to be taken deeper. The dam was finally completed in June; water rose steadily for the first 12 to 14 feet but in July-October owing to the dry weather no appreciable difference in level was noticed. However, in November, the level rose to within 18 inches of the overflow and in December full supply level was reached. There will therefore be available for planting some 660 acres of padi land inundated by the dam.

The Durian Sebatang scheme which was constructed during the year provides for an irrigation supply from the Sungei Dong. The ground through which the *tali ayer* passes is pervious and it is for this reason that previous *tali ayer* failed. The new *tali ayer* is provided with clay lining and many drainage crossings and up to date approximately three-fourths mile has been constructed.

A scheme was undertaken in Gali Tengah in Raub district, consisting of the construction of permanent headworks of rubble masonry and concrete at the head of the area and a *tali ayer* 2½ miles long to supply an area of 270 acres of which at present only 195 acres are under cultivation. The kampong and padi lands are very much intermingled so that the location of the *tali ayer* required avoidance of interference with the kampong lands while giving the necessary command of water to the padi lands. The headworks were completed during the year, also half a mile of *tali ayer*.

Draining and Bunding: Selangor Coastal Areas.—The whole of the coastal area from Sabak Bernam to Klang has been suffering for many years from the entry of salt water into the agricultural lands which kills off or interferes with coconut plantations and padi cultivation, and increases the incidence of malaria. The deterioration is the same all along the coast. Lands were opened up by the construction of drains but as these were not provided with proper bunds and control gates, the tidal waters swept over the unprotected land and entered into the heart of the area. The scour of the tides gradually widens the drains, the banks fall in, and the effect of salt water gradually spreads over most of the area. At the same time the felling of the coastal jungle allows the highest tides to inundate lands previously free from flooding. The solution to these problems is the provision of bunds and tidal control gates and the preservation of a forest belt along the coast.

The Sabak Bernam bund between its western end at Sungei Bernam Estate and Sungei Tengar, a length of 348 chains was constructed by Malay labour and is now complete. The dragline excavator employed on the contract, worked a 24-hour day continuously throughout the year and by the 31st December had dumped spoil for a little more than 10 of the 15 miles included in the contract. In all, approximately 124,000 cubic yards of earthwork were placed during the year. The scheme was commenced in 1933 and the expenditure to the end of 1935 was $117,879 out of a total estimated cost of $180,000.

In connexion with the scheme for the protection of the coastal area between Sungei Sekindi and Sungei Tengi, a dragline excavator has been purchased and was delivered at Sungei Besar in August and after erection and testing, commenced work in October. By the end of December it completed 5,921 feet of bund. This bund which will join up with the Sabak Bernam bund will extend the whole length of the coast to Sungei Tengi for the protection of the existing coastal strip of kampong and the 3-mile belt of potential padi area along 28 miles of coast. In conjunction with the construction of the bund, the construction of 3 permanent water-gates at Sungei Burong, Sungei Panchang Bedena and Sungei Besar have been commenced.

At Jeram, work was commenced on the construction of a coastal bund connecting with the Klang-Kuala Selangor Road from the 17th to the 21st mile together with a tidal control gate. The bund construction was given out to the local kampong Malays but owing to the slow rate of progress a contract was also let. Progress was, however, slow due to wet weather and sickness and the work was incomplete at the end of the year; the tidal control gate was practically completed and $6,156 was spent out of a provision of $12,000.

Kinta River.—Owing to a somewhat serious increase in the incidence of malaria at Batu Gajah which was traced to swamp breeding anopheline mosquitoes, funds were provided in April, 1934, for the reclamation of swamp areas bordering the town. The methods of reclamation adopted were threefold; namely, sliming from small streams, by discharging slimes from nearby tin mines into the streams and depositing on the areas; filling certain areas adjacent to the Kinta River by pumping sand from the river on to the area by suction dredgers and regrading the channel by use of the dipper dredger to improve drainage. These methods besides providing for reclamation of the swamp area have also the advantage of improving the river channel and protecting the town from flooding.

The work was completed in October this year, the total cost being $68,944 against an estimate of $69,000.

Selangor River.—The scheme for the training of the Selangor River at Kuala Kubu in a defined channel along the right bank of the valley with the object of retaining and stabilizing the deposits of silt washed down into the valley in former years from mining in the hills, was continued. The new channel is graded by means of a stone weir and rapids and to ensure that the channel is stable the rapids are constructed in rock spurs or in virgin ground. The scheme extends over 4¾ miles of river and when completed will permit the dredging for tin of the reclaimed flats and also the buried township of old Kuala Kubu. Part of the deviation adjoins mining property and the work is being carried out in co-operation with the Mining Company who have constructed, at their own expense, a length of 1.76 miles of river to permit of dredging the old river channel through their lease. Work on the stone weir and channel was started in 1934 and during 1935, 1.5 miles of dry weather channel from Kuala Kubu Lama to the upstream boundary of the mining lease was completed; the river is now being trained towards this channel and the old bed of the river reclaimed by silt retained by the training fences. The amount spent in 1935 was $29,204 making a total of $51,157 to the end of the year on an original estimate of $120,000 of which $100,000 is provided by the Selangor River Protection Reserve Fund.

Serendah River.—The training of the Serendah River above Serendah which was commenced in 1933, was continued, and up to date, 129,748 cubic yards of silt have been accumulated on the flats which would otherwise have been washed into the river. The effect of this has been to lower bed levels at the road and railway bridges by approximately 1¾ feet where, previous to the training, the bed was steadily rising. If the silt so trapped had been allowed to go downstream, it would have spread itself over the reach between Serendah town and the bridge at Sungei Choh Estate, 4 miles down. This would have caused the elevation of the river bed at Serendah by at least 18 inches above the peak level of 1933 and would have entailed the flooding of Serendah town and the loss of both the road and railway.

A scheme has been prepared for deviating the river, constructing bunds and spillways and dredging the river, with the following objects:

(*a*) Reduction of river levels at Serendah town by 12 feet, thus ensuring the safety of the town, railway and road;

(*b*) Adequate silt storage above the town to ensure that resilting of the river does not occur during the mining of the flats;

(*c*) Gradual silting up of the flooded *lombong* behind the town;

(*d*) Release of valuable land for mining.

The work is being carried out partly at the expense of the mining company and partly at the expense of Government and under the supervision of the Drainage and Irrigation Department.

Klang River.—The Kuala Lumpur flood channel was completed in 1932. In 1926 a flood of 8,000 cubic feet per second flooded the town to depths of 4 feet and over. The town has since been free from flooding although the discharge has exceeded the amount at which the town used to be flooded on 7 occasions since 1926.

The need for stone pitching of the low water channel banks through the entire length of the flood channel has been evident for some time as these banks, where unprotected, have been rapidly scoured. The pitching has been carried out this year and the berms which had been raised by silt deposits during floods were reduced to their designed levels and the flood banks raised and strengthened where necessary. Out of a provision of $42,000, $34,971 were spent of which $17,745 were spent in pitching; $5,989 on reducing the height of the berms and so increasing the capacity of the waterway; $8,197 on strengthening the flood banks and $3,040 on miscellaneous works such as town drain outlets.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment (Cap. 2) and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;
(*b*) Courts of a Magistrate of the First Class;
(*c*) Courts of a Magistrate of the Second Class;
(*d*) Courts of a Kathi and Courts of an Assistant Kathi;
(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record and generally, in original jurisdiction, has the same jurisdiction and authority as is exercised in England by the Chancery and King's Bench Divisions of the High Court of Justice. The establishment consists of a Chief Justice and three Judges, but the Chief Justice and Judges of the Supreme Court of the Colony and the Judge of the Supreme Court of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The Chief Justice and Judges are appointed by the High Commissioner, who may also appoint any fit and proper person to act temporarily as Chief Justice or as a Judge, and may terminate any such appointment.

Magistrates are appointed by the Resident by name or office. Appointments have always been made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally, every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a Penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a Penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment (Cap. 147) for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code (Cap. 154) in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang the Police Contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner who, subject to the general direction of the Commissioner of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his Contingent. A fifth Contingent exists in the Depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is, also in Kuala Lumpur, the headquarters staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch which co-ordinates Criminal and Political information in the Federated Malay States and the Criminal Registry or Fingerprint Bureau which serves not only the Federated Malay States but also the Straits Settlements and Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hongkong, Netherlands Indies, Siam and Indo-China.

The Federated Malay States Police cadre provides for fifteen British officers for service on deputation in Unfederated Malay States and the Federated Malay States Railway Police. The Commissioner of Police visited Kedah, Kelantan and Trengganu during the year.

The total approved strength of the Police Force was 3,935 on 1st January, 1935, comprised as follows:

98	British officers;
61	Malay and other Asiatic officers;
2,306	Malay rank and file;
1,246	Northern Indian subordinate Police officers and constables;
224	Detectives (of various nationalities).

In addition there is a Veterinary Police of 68 Malays and Indians which, for disciplinary purposes and reasons of economy, is housed in Police barracks and is paid from Police Votes, though under the direction of the Veterinary Department.

During the year 287 Malays were enrolled. Of the men recruited during this year sixty had an English education. The majority came from Negri Sembilan, Perak, Selangor and Malacca—Pahang and Penang contributing only six each; there was no shortage of applicants. One hundred and eight Northern Indians were enrolled. The physical standard of recruits of both nationalities was up to the average.

The increased scope for employment and cheapness of rice, the staple food of the Chinese combined with the higher prices of tin and rubber provided conditions favourable to a decrease in crime. The figures for 1935 were satisfactory.

Offences of all kinds reported at police stations during the year totalled 96,796 compared with 97,920 in 1934. Of this total, 7,977 were reports of seizable offences, a figure which compares with 6,601 the previous year. At the close of the year 2,453 convictions had been recorded in respect of seizable offences.

Under the category of serious crime the offences of murder, gang-robbery and robbery are classified together. In 1935 offences under these headings totalled 89. The number of murders increased from 35 to 48, gang-robberies dropped from 5 to 4, and robberies remained at 37, the same as for last year. There were seven murders committed in the course of gang-robbery or robbery. There was no organised gang of robbers operating in the Federated Malay States during the year. There was no case of abduction nor of counterfeiting notes or coins.

The reports of house-breaking showed a slight increase and totalled 1,197 compared with 1,071 the previous year whilst thefts increased from 3,311 in 1934 to 4,061 in 1935.

Non-seizable offences totalled 88,819 compared with 91,320 in 1934. The Police prosecuted in 69,853 of these cases. There was no public gaming on a large scale during the year.

Twenty-six firearms were recovered by the Police during the year 1935. Of these, two were identified as having been lost or stolen.

The suppression of brothels and of trading in women is undertaken by the Police. In all there were 71 prosecutions instituted in pursuance of this duty.

The issue and renewal of passports was performed by the Police. Five hundred and thirty-six new passports were issued during the year, 345 were renewed, 309 endorsements were made and 222 *visas* granted.

During the year inquiry by means of fingerprint slips was made at the Criminal Registry regarding 23,294 persons charged with offences and identity was established in 4,738 instances.

There were 9,100 new records filed whilst 12,076 were deleted owing to death or because they had become valueless in consequence of the efflux of time. Since the start of the Registry in 1904 a total of 295,625 records have been filed, of which 68,936 have been deleted leaving 226,689.

There were 253 persons banished from the Federated Malay States during the year.

PRISONS.

Description.—Of the six prisons in the Federated Malay States, the one at Taiping is primarily a convict prison. The others at Batu Gajah, Kuala Lumpur, Seremban, Kuala Lipis and Kuantan are local prisons.

Prisoners are also detained for short periods in lock-up cells at certain police stations.

Vagrants are confined to special vagrant wards.

Population.—The total daily average population of all the prisons which, in 1934, was 1,119.46 decreased to 994.84 in 1935.

At the beginning of 1935 there were 935 prisoners remaining and 5,678 were admitted during the year. On the 31st December, 1935, there were 1,074 prisoners remaining in all the prisons after 5,529 discharges, 5 deaths, 4 executions and one escape.

Health.—The health of the prisoners was good.

Juvenile Offenders.—Juvenile offenders are sent to the Reformatory at Singapore as there is no special institution for their reception in the Federated Malay States. This Reformatory is administered by the Education Department.

There is no probation system.

CHAPTER XIV.

Legislation.

During 1935 twenty-three Federal Enactments were passed, of which the following are the more important:

No. 1. The Mining (Amendment) Enactment. The 1928 Enactment contained elaborate provisions as to oil leases. These had never been made use of and it is believed that they never can be required here: they have accordingly been removed. The new section 17 makes provision for the recovery of rent. The reason for departing to some extent from the similar procedure of the Land Code, which previously applied, is that it is thought undesirable that mining land should be sold at public auction for the recovery of arrears of rent. The amended law will enable realienation to take place. Provision is made for allowing the creation of a lien by deposit of a mining title (section 17). The powers under sections 44, 130 and 131 of the Principal Enactment are now given to the Ruler in State Council. Many of the remaining amendments were suggested by the Mines Department with a view to removing ambiguities and making the law clearer with regard to minor points of technical detail.

No. 6. The Carriage by Air Enactment gives effect to the Convention for the unification of certain Rules relating to International Carriage by Air signed at Warsaw on the 12th day of October, 1929, and follows closely the form of the Carriage by Air (Colonies, Protectorates and Mandated Territories) Order, 1934.

No. 11. The Whaling (Prohibition) Enactment. This Enactment is designed to give effect, in respect of ships registered or licensed in the Federated Malay States, to the International Convention for the Regulation of Whaling, signed at Geneva on 24th September, 1931.

No. 16. The Treaty of Peace (Covenant of the League of Nations) Enactment. This Enactment prohibits the making of loans to the Government of Italy or to persons in Italian territory, and follows the action taken by the United Kingdom and other countries for bringing into effect the decision adopted by the co-ordinating Committee of the League of Nations under Article 16 of the Covenant. The Enactment follows closely the form of Article 3 of the Imperial Order in Council.

CHAPTER XV.

Public Finance and Taxation.

Budget for 1935.

The Estimates of Revenue and Expenditure for the year 1935 provided for a revenue of $55,935,693 (excluding Railway Revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway expenditure on Revenue Account) of $50,646,034.

Actual revenue and expenditure.

The actual revenue for the year was $62,364,264, while expenditure came to $51,119,943. There was thus a surplus of $11,244,321 against an estimated surplus of $5,289,659.

Revenue analysed.

The excesses in revenue as compared with the estimate were:

	Excess.
Customs	$3,121,430
Excise	67,005
Forests	231,609
Lands and Mines	74,390
Licences and Internal Revenue ...	394,473
Fees of Court or Office, etc.	507,720
Municipal	115,357
Light, Water, Power, etc.	527,532
Posts, Telegraphs and Telephones ...	193,145
Timber and Minor Forest Products (shortage)	35,956
Rents on Government Property ...	35,086
Interest	178,041
Miscellaneous	828,154
Land Sales	156,485
Sale of Property	32,000
Colonial Development Fund	2,100
Total ...	$6,428,571

The excesses and shortages in Customs, Excise, Lands and Mines, Licences and Internal Revenue, Municipal and Light, Water, Power, etc., revenue as compared with the estimate were:

(a) Customs—

		Excesses.		Shortages.
Export Duty on	Tin	$1,200.616		
,,	Rubber	247,497		
Import Duty on	Tobacco	1,065,354		
,,	Spirits	171,046		
,,	Petroleum	487,537		
,,	Kerosene	30,977		
,,	Sugar	160,071		
,,	Oils	—	...	$ 92,888
,,	Textiles, etc. ...	—	...	114,177
,,	Rice and Padi ...	—	...	410.403
Other Items	... ...	375,800		
	Total ...	$3,738,898	...	$617,468

Nett excess $3,121,430.

(b) Excise—

	Excesses.		Shortages.
Sale of Chandu	—	...	$109,364
Other Items	$176,369		

Nett excess $67,005.

	Excesses.	Shortages.
(c) Lands and Mines—		
Land Rents (Recurrent)	$15,786	
Other Items	58,604	
Total excess ...	$74,390	
(d) Licences and Internal Revenue—		
Traction Engines and Motor Cars ...	$115,481	
Other Items	278,992	
Total excess ...	$394,473	
(e) Municipal—		
General Assessment	$ 2,381	
Other Items	112,976	
Total excess ...	$115,357	
(f) Light, Power, Water, etc.—		
Light	$390,571	
Water	127,452	
Slipway	9,509	
Total excess ...	$527,532	

The excess under Fees of Courts, etc., is accounted for by the following large items:

(*a*) Recoveries of interdepartmental overpayments in previous years—		
(i) Railways ...	$137,901	
(ii) Other ...	45,364	
		$183,265
(*b*) Reimbursement for Survey Work		31,668
(*c*) Refunds and contributions by other administrations		38,419
(*d*) Sundry Sales		29,222
(*e*) Hire of Dredger and Hopper Barges		21,350

The excess under Interest is accounted for principally by recovery of interest on Buffer Pool Tin advances, while that under Miscellaneous is due mainly to profit on Exchange $102,050 and $643,631—appreciation of investments on valuation at middle market prices.

Expenditure analysed.

The savings and excesses in expenditure as compared with the estimate were:

Head of expenditure.	Savings	Excesses.
Charges on account of Public Debt	— ...	$1,483,844
Pensions, Retired Allowances, etc.	$ 307,735	
High Commissioner	4,158	
Chief Secretary to Government	8,250	
The Rulers and Chiefs	1[illegible]8	
The Residents	— ...	1,997

Head of expenditure.	Savings.	Excesses.
Malayan Civil Service and Malay Administrative Service	17,377	
Agricultural	52,084	
Audit	6,309	
Chinese	10,587	
Clerical Service	26,235	
Clerical Service (States)	— ...	7,807
Colonial Development Fund	— ...	2,100
Co-operative Societies	13,512	
Courts	15,661	
District and Land Offices, etc.	23,100	
Drainage and Irrigation	21,149	
Drainage and Irrigation—Annually Recurrent	3,675	
Drainage and Irrigation—Special Services ...	4,622	
Education	131,851	
Electrical	— ...	124,116
Estate Duty Office	— ...	1,444
Exchange	10,000	
Fisheries	— ...	2,452
Forests	— ...	16,513
Game Warden	8,204	
Geological Survey	3,547	
Government Gardens and Plantations ...	1,915	
Indian Interpreters	5,947	
Labour	634	
Legal	— ...	640
Malayan Establishment Office	36,502	
Marine	9,202	
Medical and Health	205,079	
Military	8,044	
Mines	23,248	
Miscellaneous Services	— ...	139,003
Municipal	54,284	
Museums	1,562	
Office of the Registrar of Titles	— ...	174
Public Trustee	— ...	1,366
Official Assignee and Registrar of Companies	160	
Police	146,166	
Posts and Telegraphs	68,330	
Printing	25,838	
Prisons	84,554	
Public Works Department	35,458	
Public Works—Annually Recurrent	22,205	
Public Works—Special Services	— ...	329,374
Purchase of Land	113,930	
Surveys	93,423	
Town Planning	1,202	
Customs and Excise	14,875	
Transport	— ...	4,766
Treasury	— ...	856
Vehicles	3,146	
Veterinary	2,685	
Total ...	$1,642,543 ...	$2,116,452

Nett excess $473,909.

EXCESS.

(a) *Charges on account of Public Debt.*—This is due to the redemption of the 4½ per cent. Straits Settlements Sterling Loan and the issue of the 1935 Conversion F.M.S. Loan at 3 per cent.

(b) *The Residents.*—The excess is due to the restoration of 50 per cent. cut in entertainment allowances.

(c) *Clerical Service (States).*—This is due to replacement of General Clerical Service clerks by State Service clerks. The total clerical service shows a saving.

(d) *Colonial Development Fund.*—The excess is balanced by a corresponding increase in revenue under that head.

(e) *Electrical.*—The excess is explained by the increased activities of the Department necessitating increased provision for maintenance in the State of Selangor.

(f) *Estate Duty Office.*—Provision of temporary assistance for certain investigations resulted in this excess.

(g) *Fisheries.*—The excess is due to special repairs and renewals to the motor cruiser "Tinggiri" and to increased travelling and transport charges.

(h) *Forest Department.*—The excess is accounted for by increased expenditure in Perak due to retrocession of Dindings and Forest Organisation.

(i) *Legal.*—The excess is due to purchase of Law Reports and Text Books and to increased travelling to attend the Assizes and State Councils.

(j) *Office of the Registrar of Titles.*—The excess is due to the provision of temporary clerical assistance.

(k) *Public Trustee.*—Engagement of a temporary bookkeeper and the purchase of a typewriting machine accounted for the excess.

(l) *Treasury.*—The excess is accounted for by transport and travelling charges incurred by a Treasury Accountant in the regular inspection of the Malay Regiment's accounts at Port Dickson.

(*m*) *Transport.*—The excess is accounted for by the large number of movements of officers in the various States.

(*n*) *Miscellaneous Services.*—The provision of the following large items during the year caused the excess on this vote:

1. Purchase of equipment for the Perak Flying Club	$40,000
2. Taking over of the Kuala Kurau Rice Mill by Perak Government ...	32,000
3. Cost of compilation and printing of F.M.S. Laws	30,000
4. Contribution to Pahang for the maintenance of Fraser's Hill ...	23,855
5. Silver Jubilee Celebration	21,500
6. Refund to Colony in respect of F.M.S. seconded officers who had not proceeded on leave prior to 1st January, 1934	15,280
7. Kinta Sub-Treasury Loss	10,225
8. Loss on Factory Trading for 1934 ...	10,178

(*o*) *Public Works, Special Services.*—The provision of the following large items of Special Services without corresponding savings in the estimated items accounts for the excess under this head:

1. Permanent Baracks, Port Dickson	$104,299
2. Construction of an Aerodrome at Ipoh	75,000
3. Additions and alterations to Astana Sri Menanti	60,000
4. Warehouse, office, quarters and Barracks, Customs, Dindings ...	52,200
5. Purchase of Railway quarters, Ipoh	39,700
6. Improvement to Kuala Lumpur Aerodrome	39,051

7. Removal and re-erection of Government Buildings, Gopeng ...	35,772
8. Construction of the Golf Course, Cameron Highlands	30,000
9. Conversion of Decrepit Settlement into part of Leper Settlement, Sungei Buloh	27,924
10. Extension, Police Depôt, Kuala Lumpur	21,700
11. Alterations to the Military Barracks, Taiping	17,000
12. Aeroplane Landing Ground, Sitiawan	15,000

Public Debt.

The total amount of the public debt on 31st December, 1935, was $94,471,429, being

6 per cent. Straits Settlements Sterling Loan	$44,185,714
3 per cent. Federated Malay States Sterling Loan	34,285,715
4½ per cent. Federated Malay States Local Loan	16,000,000

as against $96,185,714 on 31st December, 1934, made up of

6 per cent. and 4½ per cent. Straits Settlements Sterling Loan	$80,185,714
4½ per cent. Federated Malay States Local Loan	16,000,000

The first instalment (£5,155,000) of the Straits Settlements Sterling Loan issued in December, 1921, at 97, bearing interest at 6 per cent. was outstanding on 31st December, 1935, while the second instalment (£4,200,000) issued in May, 1922, at 95, with interest at 4½ per cent. was redeemed partly in cash and partly by means of a conversion Federated Malay States Loan of £4,000,000 at 3 per cent. at par in June, 1935. The Sinking Funds contributions, started in 1925, amounted to $27,526,902.

The Federated Malay States Local Loan of $16,000,000 was issued in May, 1931, at 98, bearing interest at 4½ per cent. The Sinking Fund for the redemption of this loan was started in January 1934, and amounted to $330,464.

Assets and Liabilities.

The following statement shows the assets and liabilities on the 31st December, 1935:

LIABILITIES.		$ c.
Capital Account (Straits Settlements Sterling Loan), Balance at credit thereof (*a*)		491,176 62
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959), Balance at credit thereof (*c*)		4,479,364 30
Due to other Governments—		
Ceylon (Agency Account) ...	$54,929.58	
India (Agency Account) ...	193,312.92	
India (Current Account) ...	25,249.92	
Johore (Current Account) ...	2,298.12	
		276,290 54
Family Remittances		1,450 27
Buffer Pool Tin Scheme... ...		4,982,443 94
S.S. Government War Service Land Grant Scheme		16,132 03
Deposits—		
Courts	$211,456.02	
Forests	196,732.33	
Lands	150,181.87	
Postal	105,715.13	
Postal Account Stores, Colony	300,000.00	
Planters' Loan Board	600,000.00	
Miscellaneous ...	993,707.94	
		2,557,793 29
Selangor River Protection Reserve Account		58,324 11
Sundry Funds—		
Police Fine and Reward Fund...	$ 46,696.79	
Public Officers' Guarantee Fund	417,665.44	
R.E.R. & P. Reserve Fund ...	2,095,693.14	
Phillips' Agricultural Scholarship Fund ...	5,702.96	
Malayan Flood Relief Fund ...	53,241.45	
Rubber Fund ...	1,487,615.96	
Miscellaneous ...	49,291.81	
		4,155,967 55
Opium Revenue Replacement Reserve Fund		27,795,853 50
Surplus		60,771,144 94
		105,585,941 09

ASSETS.		$ c.
Cash—		
In Treasuries and Banks	$9,443,556.63	
In Agencies	78,006.33	
In Transit	570,714.87	
Fixed Deposits	79,443.70	
Joint Colonial Fund (Crown Agents)	21,702,857.14	
		31,874,578 67
Investments—Surplus Funds—		
Sterling Securities	$12,378,945.11	
Dollar Securities	12,043.00	
		12,390,988 11
Investments—Opium Revenue Replacement Reserve Fund—		
Sterling Securities	$20,510,139.21	
Perak River Hydro-Electric Power Coy. Shares	7,285,714.29	
		27,795,853 50
Investments, Specific Funds—		
Police Fine and Reward Fund ...	$ 42,737.50	
Public Officers' Guarantee Fund	375,609.04	
Malayan Flood Relief Fund ...	51,516.00	
Phillips' Agricultural Scholarship Fund	5,648.00	
		475,510 54
Sundry Outstanding Accounts		11,466 98
Suspense—General		25,065 98
Suspense—Stores and Materials—		
Post Office	$ 763,043.89	
P.W.D.	197,968.71	
Electrical	605,711.85	
Marine Slipway	14,385.19	
Burma Rifles	110,919.21	
Minor Forest Products, etc. ...	11,493.91	
		1,703,522 76
Advances—		
Due by other Governments ...	59,562.78	
Due by Railways	113,208.49	
Central Health Board	115,021.99	
Bentong Tailings Retention Scheme	218,469.58	
Others	291,972.40	
		798,256 24
Imprests		87,055 09
Loans—		
Siamese Government (*b*) ...	$26,228,563.54	
Brunei "	133,000.00	
Kelantan "	300,000.00	
Planters	1,610,313.88	
War Service Land Grant Scheme	1,221,136.79	
Agricultural	15,118.48	
Buildings	145,849.05	
Miscellaneous...	769,682.57	
		30,423,664 31
		105,585,941 09

NOTE:

(*a*) The Straits Settlements Sterling Loan of £5,155,000 ($44,185,714.29) appears on the credit side of the Capital Account (*vide* Appendix B). The expenses of the issue of the loan and expenditure on works authorised to be carried out therefrom appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) The repayment of the loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

(*c*) The 4½ per cent. Local Loan, 1959, appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of the issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*d*) The F.M.S. 3 per cent. Sterling Loan, 1960-70, of £4,000,000 raised for the purpose of redeeming the 4½ per cent. Straits Settlements Sterling Loan, 1935-45, of £4,200,000 appears on the credit side of the Capital Account (*vide* Appendix D). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

The result on the year's working showed a surplus of $1,773,757 which was credited to the Renewals Fund, so that the revenue and expenditure balanced. **Railways.**

The loan to the Siamese Government of £4,630,000 ($39,685,714), which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $26,228,564 on the 31st December, 1935, having been reduced by the payment of the twelfth instalment due on 1st January, 1935. **Loan to Siam.**

The loan to Brunei, which stood at $378,200 on 31st December, 1934, has been reduced to $133,000. (It was fully repaid in January, 1936). **Loan to Brunei.**

The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1935. **Loan to Kelantan.**

The total amount of Planters' and War Service loans outstanding on 31st December, 1935, was $2,831,450 against $3,176,421 on 31st December, 1934. **Loans—Planters, War Service, etc.**

Miscellaneous loans outstanding on 31st December, 1935, amounted to $930,650 compared with $1,123,994 on 31st December, 1934. **Other loans.**

The Federated Malay States contribution to the Buffer Stock was approximately 3,587 tons and the total advances came to $2.5 millions carrying interest at 4½ per cent. per annum and repayable at option. The total amount of advances outstanding at date of closing the Pool account by sale of stock was $1,726,573. That amount with interest and other administration charges was recovered from the proceeds of sale in December, 1935. The nett amount due to the contributors to the Scheme amounted to $4,982,444 which was duly distributed in January, 1936. **Buffer Pool Tin Scheme.**

The surplus on 31st December, 1934, was $49,526,824. As the revenue for the year exceeded the expenditure by $11,244,321, the surplus was increased to $60,771,145, on the 31st December, 1935. **Surplus.**

The liquid assets comprising cash and realisable investments (excluding the investments earmarked for certain specific funds) amounted to $44,265,567 at the end of the year (including the $5 millions due to Buffer Stock contributors) as compared with $24,252,665 at the beginning.

The holdings in Perak River Hydro-Electric Power Company Limited, viz.: £500,000 Preference shares and £75,000 Ordinary shares, which were written down to $1 on 31st December, 1934, have on reconstruction of the Company been converted into 82,500 one pound Ordinary shares and valued at market rates on 31st December, 1935.

Sungei Draka Plantations Limited was sold at the end of the year and the Government recovered $408 as a final payment. The shares had been written down to $1.

Opium Revenue Replacement Reserve Fund.

This fund was started with $10 millions provided out of revenue in 1925; with $9,828,503, representing contribution at 15 per cent. of annual revenue from Chandu Sales for the years 1926 to 1930, and with the accumulated interest from inception to 31st December, 1930, stood at valuation on 31st December, 1934, at $28,070,430. It has been decreased to $27,795,854 on valuation of securities at current middle market rates on 31st December, 1935. The fund is invested in sterling securities. The loan of £850,000 to the Perak River Hydro-Electric Power Company, Ltd., has on reconstruction of the Company in 1935, been converted into 5 per cent. preference shares.

The interest earned on this fund during 1931 to 1935 was credited to revenue and contribution to the fund during these years was suspended.

Rubber Fund.

This fund which was started on 1st June, 1934, on introduction of rubber regulation and stood at $628,898 on 31st December, 1934, has been increased to $1,487,616 on 31st December, 1935, after payment of the regulation and other incidental expenses connected therewith.

Rubber Experimental Research and Propaganda Fund.

This fund which was created by an allocation of $2½ millions in 1930 and stood at $2,181,407 on 31st December, 1934, was reduced to $2,095,693 on 31st December, 1935. The commitments against this balance amounted to $858,571 on 31st December, 1935.

Straits Settlements Sterling Loan Capital Account.

A statement of the 6 per cent. Sterling Loan Account is published as Appendix B to this report showing an unspent balance of $491,177 on 31st December, 1935, the major portion of which balance has been earmarked for the development of Telegraph, Telephone and Wireless.

Federated Malay States Sterling Loan Capital Account.

A statement of the 3 per cent. Sterling Loan Account is published as Appendix D to this report showing that the proceeds have been utilised for the redemption of the 4½ per cent. Straits Settlements Sterling Loan.

Federated Malay States Local Loan Capital Account.

A statement of the 4½ per cent. Local Loan Capital Account is published as Appendix C to this report. Of the total proceeds of $15,640,000, expenditure on railway, electrical and public works accounted for **$11,160,636**, leaving a balance of **$4,479,364** still available to meet capital expenditure in 1936 and subsequent years.

The following is a summary of the Customs tariff:

TABLE A.

IMPORT DUTIES.

Description of article.	Unit.	Full duty.	Preferential duty.
I.—Intoxicating liquors :		$ c.	$ c.
(*a*) Rectified spirit	Per proof gallon ...	14 00	
(*b*) Brandy and any other intoxicating liquor not hereinafter provided for	,, ...	14 00 ...	10 50
(*c*) Brandy in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit	Per gallon ...	10 50 ...	8 00
(*d*) Whisky, rum and gin ...	Per proof gallon ...	13 00	
(*e*) Whisky, rum and gin in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit	Per gallon ...	9 50	
(*f*) Toddy arrack, saki and samsu including medicated samsu	Per proof gallon ...	12 00	
(*g*) Bitters and liqueurs not exceeding 100 per cent. of proof spirit	Per gallon ...	13 00	
(*h*) Sparkling wines not exceeding 42 per cent. of proof spirit	,, ...	6 00 ...	5 00
(*i*) Still wines exceeding 26 per cent. but not exceeding 42 per cent. of proof spirit	,, ...	4 50 ...	3 90
(*j*) Still wines not exceeding 26 per cent. of proof spirit	,, ...	1 50 ...	90
(*k*) Ale, beer, stout, porter, cider and perry	,, ...	1 30 ...	1 20
II.—Tobacco :			
(*a*) Cigars and snuff	Per pound ...	1 60	
(*b*) Cigarettes	,, ...	1 10 ...	1 00
(*c*) Unmanufactured tobacco ...	,, ...	70	
(*d*) Manufactured tobacco excluding cigars, cigarettes and snuff			
(i) if imported for sale to the public in air-tight tins or containers	,, ...	1 10 ..	1 00
(ii) not otherwise provided for	,, ...	80	

Description of article.	Unit.	Full duty.	Preferential duty.
III.—Petroleum :		$ c.	$ c.
(*a*) Kerosene with a flashing point higher than 73°F but below 200°F	Per gallon ...	15	
(*b*) Petrol	,, ...	35	
IV.—(*a*) Sugar, including sucrose, saccharose, cane sugar, beet sugar, maple sugar, palm sugar, gula malacca, gula kabong, gula nipah, gula kachang, jaggery, sugar candy, sugar cane, molasses, treacle, golden syrup, maple syrup, dextrose, glucose, grape sugar, starch sugar, corn sugar, starch syrup, corn syrup, wheat syrup, wheat jelly, rice jaggery, laevulose, fructose, fruit sugar, invert sugar, honey lactose, milk sugar, maltose and malt sugar	Per pound ...	05 ...	03
(*b*) Sweets, chocolates, confectionery, and any other products containing more than sixty parts per centum by weight of any one or more of the sugars enumerated under IV (*a*)	,, ...	05 ...	03
(*c*) Syrups, cordials, fruit juices and other solutions containing more than forty parts per centum by weight of any one or more of the sugars enumerated under IV (*a*)	Per gallon ...	50 ...	30
Exemptions			
(i) Sweets, chocolates, and confectionery in manufacturers' unopened original tins, bottles, cartons or boxes containing not more than two pounds nett weight.			
(ii) Articles which are dutiable under any other paragraph of Table A.			
V.—Cartridges other than such as are included in section 19 of the Explosives Enactment (Cap. 200)	Per 1,000 ...	11 00 ...	10 00

Description of article.	Unit.	Full duty.	Preferential duty.
VI.—Matches:		$ c.	$ c.
Containers with—			
(i) not more than 10 matches	Per 100 containers	12	
(ii) more than 10 but not more than 20 matches	„	24	
(iii) more than 20 but not more than 50 matches	„	60	
For every additional 25 matches or part of 25 matches over 50 in a container, a duty additional to the duty under (iii)	„	30	
VII.—Edible oils and fats:			
(*a*) (i) Kachang and ground-nut oil	Per pound	06	03
(ii) Gingelly oil	„	04	02
(*b*) Butter, tinned	„	17	12
(*c*) „ frozen	„	20	15
(*d*) Magarine	„	10	05
(*e*) Lard	„	04	
(*f*) Ghee, vegetable ghee, and all other edible oils and fats not specified above except coconut oil	„	10	
VIII.—Cement	Per ton	12 00	6 00
IX.—Cement manufactures other than tiles	„	2 00	
X.—Tiles:			
(i) Roofing	„	12 00	
(ii) Flooring and wall	„	12 00	10 00
XI.—Cosmetics and perfumery	*Ad valorem*	50%	25%
XII.—Textiles and apparel:			
(*a*) Piece goods made of cotton, linen, artificial silk, and all mixtures made of cotton, linen, artificial silk, silk and, or, other materials	*Ad valorem* or per yard	20% or 5 cents per yard whichever is higher	10% or 2½ cents per yard whichever is higher
(*b*) Cotton, linen, jute, silk or artificial silk, felt, flannel, woollen and all textile goods made from plant fibres, whether finished goods or not, other than yarn, thread, gunnies and waste, except as provided in (*a*) above	*Ad valorem*	20%	10%

Description of article.	Unit.	Full duty.	Preferential duty.
		$ c.	$ c.
(*c*) Wearing apparel not otherwise provided for, including boots, bootees, shoes, overshoes, slippers and sandals of all descriptions and of whatever material finished or unfinished, other than articles specified in the next following item	,,	20%	10%
(*d*) Boots, bootees, shoes, overshoes, slippers and sandals of all descriptions made wholly or partly of rubber, balata or gutta percha (except where the outer part of the uppers, apart from stitchings, fastenings or ornaments, is made entirely of leather or leather and elastic)	Per pair	50	10
(*e*) Rubber soles	,,	25	05
XIII.—Tanned hides and skins, leather and imitation leather, leather and imitation leather manufactures other than fancy goods	*Ad valorem*	15%	5%
XIV.—Cycles and accessories :			
(*a*) Cycles—complete	Each	4 50	1 50
Saddles	,,	30	10
Frames—complete	,,	3 00	1 00
Frames—parts of	Per piece	15	05
Handlebars—with fittings and otherwise	Each	30	10
Rims	,,	30	10
Chains	,,	30	10
Cycle pumps	Per dozen	30	Free
(*b*) Cycle tyres (outer covers)	Per cover	15	08
,, inner tubes	Per tube	06	03
(*c*) Motor and motor-cycle tyres (outer covers)	*Ad valorem*	20%	Free
(*d*) Motor and motor-cycle inner tubes	,,	20%	,,
XV.—(*a*) Pianos	,,	10%	
(*b*) Other musical instruments, wireless receiving and transmitting sets and parts thereof including gramophones, electrical gramophones or reproducers, phonographs, records, needles, valves and other parts or accessories	,,	20%	10%

Description of article.	Unit.	Full duty.	Preferential duty.
		$ c.	$ c.
XVI.—Coffee, raw	Per pound	03	
,, prepared	,,	06	
,, extract or essence, whether mixed with other substances or not	*Ad valorem*	5%	
XVII.—Ground-nuts	Per pound	01½	00¾
XVIII.—Milk (including cream), condensed, desiccated or preserved	For 100 lbs. nett weight	5 00	1 00
XIX.—Fruits, jams, marmalade, vegetables, fish, meats and soups in metal, glass, or earthenware containers	*Ad valorem*	20%	5%
XX.—Printing paper	,,	10%	Free
XXI.—Manufactured brass, bronze, and copperware	,,	15%	5%
XXII.—(*a*) Batteries and parts thereof for electric torches or hand-lamps	,,	20%	5%
(*b*) All other electric batteries and parts thereof	,,	15%	Free
XXIII.—Paraffin wax and articles made thereof	,,	15%	5%
XXIV.—Fish maws and sharks' fins	,,	15%	5%
XXV.—Umbrellas and lamp-shades covered with silk, artificial silk or cotton	,,	10%	5%
XXVI.—Tea	Per pound	08	06
XXVII.—Sacharrine	,,	5 00	
XXVIII.—Fireworks and crackers	,,	10	
XXIX.—Oil cloth and linoleum	*Ad valorem*	10%	
XXX.—Straw, grass, rush and mengkuang (pandan) manufactures	,,	10%	

TABLE B.

EXPORT DUTIES.

I.—AGRICULTURAL PRODUCTS.

Description of article.	Duty.
Gambier	15 cents per pikul
Gutta-percha (cultivated) meaning gutta-percha, as defined in the Forest Rules, 1920, produced from trees which have been cultivated on alienated land to the satisfaction of the Chief Secretary to Government	2½ per cent. *ad valorem*

II.—FOREST PRODUCTS.

Description of article.	Duty.
Rembia ataps	10 per cent. *ad valorem*
Nipah ataps—	
(*a*) Bertindeh tulang	$1.50 per 1,000
(*b*) Bertumu tulang	$1.00 ,,
(*c*) Bertumu daun	.75 ,,
(*d*) Other kinds	10 per cent. of the wholesale prices in the centres of production
Getah rambong (India-rubber) ...	$5 per pikul
Formosa camphor	10 per cent. *ad valorem*
Kepong bark	10 ,, ,,

III.—MINERALS, METALS AND METALLIFEROUS ORES.

Description of article.	Duty.
Tin-ore—	
When the price of tin does not exceed $41 per pikul	$2.40 per pikul
When the price of tin exceeds $41 but does not exceed $42	$2.52 ,,
When the price of tin exceeds $42 but does not exceed $43	$2.64 ,,
and so on, the duty per pikul being increased by 12 cents per every dollar by which the price of tin exceeds $41.	
In the case of tin-ore exported otherwise than under such guarantees as the Chief Secretary may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul.	
Tin, smelted or manufactured from tin-ore won in the Federated Malay States	On the same scale as that for tin-ore, together with an additional duty of one-third of the duty on tin-ore
Additional duty on all tin-ore exported	15 cents per pikul or part of a pikul
Tin slag and hard-head of tin ...	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smelted or manufactured on the amount of tin estimated to be contained in such consignment
Scheelite	$2 per pikul
Wolfram	$2 ,,
All other metals and metalliferous ores	10 per cent. *ad valorem*
China-clay or kaolin	75 cents per ton
Potash-felspar or soda-felspar intended for use as a flux or a glaze	2½ per cent. *ad valorem*
China-stone	2½ ,, ,,

IV.—(*a*) MISCELLANEOUS.

(*Perak, Selangor and Negri Sembilan.*)

Description of article.	Duty.
*Blachan	50 cents per pikul
*Fish, dried and salted	10 per cent. *ad valorem*
*Fish maws, fish refuse, ikan gelama, prawns (dried)	10 ,, ,,
*Oysters, fresh	$5 per pikul
*Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,

IV.—(*b*) MISCELLANEOUS.

(*Pahang only.*)

Fish dried—	
Class A (i) Sharks' fins	$1.50 per pikul
,, A (ii) Tenggiri, ikan merah, kachang, selor, bileh, bawal, talang ...	.75 ,,
,, B Selor kuning	.60 ,,
,, C Pelata, gelama, selor, puchat, lema	.50 ,,
,, D Kembong, Khe'kheh, selayang	.40 ,,
,, E Tamban, udang, blachan, ikan yu	.30 ,,
,, F Rambai, layor, pari, duri, bakau, budu and all other fish not mentioned above	.15 ,,
Oysters, dried, mother-of-pearl shell and beche-de-mer	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,

IV.—(*c*) MISCELLANEOUS.

Elephants	20 per cent. *ad valorem*

EXCISE DUTIES.

Chinese samsu including medicated samsu	$9 per proof gallon		
Other intoxicating liquors	$11 ,, ,,		
Matches : containers in which there are :		A.	B.
(i) not more than 10 matches ...	Per 100 containers	9 cents	8 cents
(ii) more than 10 but not more than 20 matches	,, ,,	18 ,,	16 ,,
(iii) more than 20 but not more than 50 matches	,, ,,	45 ,,	40 ,,
For every additional 25 matches or part of 25 matches over 50 in a container : a duty additional to duty under (iii)		22½ ,,	20 ,,

The rates in column "A" apply where both the matches and the containers are made from imported timber.

The rates in column "B" apply where both the matches and the containers are made from local timber.

Items marked * are exempted from payment of export duty if exported from the Dindings district—*G.* N. 2838/28-6-35.

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVI.

Miscellaneous.

ELECTRICAL DEPARTMENT.

The consumption of electricity throughout the Federated Malay States during 1935 showed a considerable increase, which can be mainly attributed to the release of additional quotas for tin production, and to the fact that Chinese miners, having now realised the advantages of electricity over other forms of motive power, have adopted electricity as the chief motive power for mining operations.

There was also an improvement in consumption for lighting and domestic purposes, and the number of units consumed for this type of load showed an increase in all Government stations throughout the Federated States.

In Kuala Lumpur the demand towards the end of the year rose to an unprecedented level and both the Ulu Langat Hydro-Electric Stations and the Bungsar Power Station became fully loaded, and no more applications for power could be considered. These stations, however, worked smoothly together throughout the year, and no operating difficulties were experienced. The total combined number of units generated was 53,297,401 as compared with 34,256,983 in 1934, an increase of 55.9 per cent.

The population included in the various areas supplied by the Kuala Lumpur system and including Rawang was 132,552 and the units sold per head of this population for private light, heat and domestic power were 35, and for industrial power 251.

Progress in some of the other larger Government undertakings is indicated as follows:

	Units Generated or Purchased.	
	1934.	1935.
Ipoh	2,732,664	3,121,997
Taiping	851,432	1,180,460
Seremban	1,082,721	1,194,970
Kuala Lipis	212,839	257,242

The total number of units of electrical energy generated in the Federated Malay States during the year, by all power stations of various types, of 100 kilowatts capacity and over (including Government and public supplies) was 297,969,927 compared with 228,078,028 in 1934, which represents an increase of 30.64 per cent. Of this total, 240,172,473 units were generated by power stations not owned by Government, and the remaining 57,797,454 by Government power stations. The total capacity of all these generating plants amounted to 121,600 kilowatts as compared with 119,600 in 1934.

It is gratifying to report that there were no fatal accidents from electric shock during the year, compared with an annual average of six accidents during the previous five years. This reduction may be accounted for by the care and attention given to installations by the Electrical Inspection Branch of the Government, and the co-operation of large consumers to ensure the safety of electrical operators.

The standard of electrical knowledge for the granting of certificates of competency to Chargemen and Engineers under the Electricity Enactment has also been raised, and this has no doubt contributed to the reduction in the number of accidents.

COMPANIES.

COMPANIES ESTABLISHED IN THE FEDERATED MALAY STATES.

During the year 24 local companies with a total nominal capital of $5,041,642.85 were incorporated and registered as compared with 26 with a total nominal capital of $6,090,000 in 1934 and 15 with a total nominal capital of $2,648,000 in 1933.

The largest number of companies incorporated and registered in any recent year was 56 ($35,764,500) in 1926, and 54 ($38,934,928) in 1920.

The main objects of the new companies were: Amusement and entertainment 2, aviation 1, charity 1, dealers in wines 1, foundry 1, general merchants 5, gold mining 1, ice manufacturing 1, mining 3, newspapers printing 1, printing 1, rubber dealers 2, rubber planting 1, rubber manufacturing 1, restaurant 1 and tin mining 1.

Thirty companies were in voluntary liquidation and one in compulsory liquidation in the Federated Malay States. No Winding-up Orders were made during the year.

There were 406 companies on the registers at the end of the year, 38 having been struck off as dissolved or defunct.

COMPANIES ESTABLISHED OUTSIDE THE FEDERATED MALAY STATES.

Twenty-three companies were brought on to the Federated Malay States registers in 1935 as compared with 29 and 38 in 1934 and 1933 respectively. The objects of these companies were briefly: agency and trusteeship business 2, contractors 3, dealers in radio and wireless 2, gold mining 1, general merchants 1, exports and imports 1, life assurance (one with fire insurance) 3, motor engineering 1, mining and planting 2, rubber planting 4, shipping 1 and tin mining 2.

Twenty companies were known to be in voluntary liquidation during the year. Eleven of these voluntary liquidations were commenced prior to 1935.

At the end of 1935, 723 companies were on the registers as compared with 730 on 31st December, 1934.

Eight Fire Insurance Companies and 28 Life Assurance Companies were on the registers as at 31st December, 1934. There was a decrease of two in the former category and of one in the latter category during the year. Three Life Assurance Companies, one of which is also doing Fire Insurance, were brought on to the Federated Malay States registers during the year.

COMPULSORY LIQUIDATION.

The liquidation of two companies were completed in 1935 and at the close of the year one company remained in the hands of a private liquidator.

BANKRUPTCY.

During the year, 110 Bankruptcy Notices and 103 Bankruptcy Petitions were filed, 88 Receiving Orders and 95 Adjudication Orders made as compared with 191 Notices, 80 Petitions, 54 Receiving Orders and 53 Adjudication Orders in 1934.

Of the persons adjudicated bankrupt, 33 were Chinese, 27 Malays, 22 Natives of India, 10 Ceylonese and 3 Eurasians.

By occupation, 58 were Government employees of various occupations, 13 Traders (8 of whom who were trading as one firm), 6 Land-owners, 4 Clerks, 1 Money-lender, 2 Printers, 1 Miner, 2 Contractors, 1 Tailor and 1 Milk seller. There were also 2 married women, 1 widow, 2 unemployed and 1 of unspecified occupation.

Trade bankruptcies showed a slight decrease in Perak and Pahang. The increase in the numbers of petitions, receiving orders and adjudication orders is mainly due to the bankruptcies of salary earners among members of the subordinate service as the result of the Government policy in dealing with the indebtedness of its employees.

The main Bankruptcy Office is in Kuala Lumpur and the Branch Office in Ipoh.

Two compositions were accepted by creditors during the year. There were 30 discharges: 20 in Perak of which 18 were granted subject to various periods of suspension, ranging from

1 week to one year, and 2 subject to consent to judgment; 8 in Selangor of which 4 were granted subject to suspension from 6 months to one year and 4 subject to consent to judgment; 1 in Negri Sembilan subject to 3 months' suspension, and one in Pahang.

There was one prosecution against a bankrupt during the year.

The gross liabilities and assets as stated by debtors were $1,696,336 and $1,022,029, respectively, as compared with $432,838 and $187,819 in 1934. There was one failure with estimated liabilities of over $100,000 but under $200,000; one of over $300,000 but under $400,000 and one with $900,000, the last being liabilities in the bankruptcy of a chettiar in Perak.

The continued slight decrease in trade bankruptcies is no doubt due to the increased circulation of money as the result of the improvement in the price of rubber, tin and copra. It is also probably due to the gradual elimination of the really weak and irresponsible trading concerns.

DEPARTMENT OF THE PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the thirteenth year of the working of the Department of the Public Trustee.

During the year the Public Trustee accepted 15 trusts in all valued at $495,776; 16 trusts were wound up and at the end of the year 99 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at $3,399,115.

The office of the Official Administrator, Federated Malay States, created in the year 1928 is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1935 was 35 valued at $566,490. Twenty-three estates were wound up and at the end of the year 73 were still being administered.

The total number of trusts and estates administered by the Public Trustee and Official Administrator as at 31st December, 1935, was 172 valued at over $4,500,000. The total fees collected by the combined offices during the year amounted to $35,109.76.

Co-operation.

The total expenditure for the calendar year was $129,529. **Expenditure.**

The position at the end of the year was as follows: **Progress.**

—	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit Societies	57	1,444	63,376	14,425	82,279
Non-Agricultural Thrift and Loan Societies	32	15,765	3,204,700	253,737	3,493,937
Registered but not working	1				
Indian Labourers' Societies	152	23,090	483,623	3,166	486,789
Unions ...	3	15*			
Registered but not working	3				
Co-operative Rubber Societies	1	37	402	161	569
Co-operative Urban Union	1	6*			
Total ...	250	40,336†	3,752,101	271,489	4,063,574

In addition, the following societies were registered and were active, but had no thoroughly systematised financial transactions:

Type.	No.
General Purposes Societies.—	
(*a*) Malay Rural	25
(*b*) Indian Settlers	2
Better Living Societies	5
Fairs	5
Sales and Purchases and Marketing Societies	3
Total ...	40

For agriculturists, the year was distinctly brighter. Though the price of padi remained low, rubber and coconuts sufficiently rose to enable a portion of past debts to be repaid out of income. Repayments of principal ($35,756) were higher than in any of the previous five years and exceeded new loans given out by $25,121. **Rural Credit Societies.**

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* Societies. † Societies not included.

Membership declined by 137. The chief cause of this was the liquidation of the Bagan Tiang Society with its 147 members.

General Purposes Societies.

Initial efforts to satisfy common needs by joint action have been made in many kampongs by the formation of General Purposes Societies. The demand for these societies is brisk and usually spontaneous. Their activities have included the maintenance of mosques and burial grounds, the provision of such amenities as a reading room, newspapers and a kampong sports ground, the promotion of health and sanitation, the destruction of rats and squirrels, the building of schools and teachers quarters, the erection of bunds, the improvement of water supply and the marketing of various rural products. Thrift is encouraged by the collection of small weekly deposits. Though some of these societies will doubtless die when the objects for which they are formed have been accomplished, their number is likely to increase steadily.

Marketing Societies.

The Egg-marketing Societies in Krian carried on a steady and increasing business. Three hundred and seventy-three thousand three hundred and thirty-eight eggs were sold, sixty thousand more than last year, at an average price of $1.86 per hundred as compared with the average kampong price of $1.66.

In spite of the enhanced price of rubber, it was difficult to revive the co-operative rubber societies. On the other hand, a small and inexpensive rubber-smoking cabinet was devised by the Rubber Research Institute and its adoption has considerably improved the quality of rubber from small-holdings.

Co-operative shops.

Many groups in rural areas have set up shops. Advice and instruction in book-keeping have been given, but most shops have a hard struggle to keep going because of bad book-keeping and too generous credit. Trading ability needs time to develop.

Thrift and Loan Societies.

The figures of these steadily increasing societies make impressive reading. Three new societies were formed. Membership was up by 2,226 to 15,765 and paid up subscription by $461,700 to $3,204,700. The amount of loans granted was $1,423,900 as compared with $1,568,400 in 1934. The majority of members have rescued themselves from outside debts and are finding it possible to purchase land or dwelling houses. Gross average savings per member increased from $202 in 1934 to $203 at the end of 1935.

The investment of capital was hampered by the high premia of the trustee stocks to which societies are limited by law.

Indian Labourers' Societies.

Societies amongst Indian labourers were popular and 18 new societies were registered. The number of societies amounted to 155 (3 not working) with a membership of 23,090 and a subscription capital of $483,623, the corresponding figures for last year being 138 (1 not working), 19,416 and $353,622. The average saving per member is $21.38. The two Indian settlements in Negri Sembilan made good progress.

LANDS.

The area in private occupation at the end of the year amounted to about 2,577,655 acres under agricultural titles and 206,402 acres under mining titles.

It is estimated that of the 27,540 square miles covered by the four States of the Federation, 15.8 per cent. is land in private occupation and 27.15 per cent. is reserved forest, while the balance of 57.05 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

The expenditure of this Department was again lower than in any year since the formation of the Department in 1908.

The demand for title surveys increased by almost 33 per cent., the greater part of the increase occurring in the second half of the year.

The Trigonometrical Branch was engaged on the primary and secondary triangulation of Brunei. This work is being carried out at the expense of the Brunei Government.

The activities of the Topographical Branch were confined to revision of some of the older sheets.

The supervision of the assessment of small and certain medium estates in connection with Rubber Regulation was continued up to the end of March when the work was practically completed. From 1st April officials working directly under the Controller of Rubber were appointed to each State.

The Map Production Branch continued to print the coupons required for rubber regulation for the whole of Malaya. The design for each denomination was altered each quarter and so far as is known no attempts at forgery were made. Nearly 8 million coupons were supplied.

Routine meteorological observations were continued at the 17 main stations and at a large number of auxiliary stations. The policy of moving meteorological stations to sites on the new aerodromes has been continued. Two have already been moved and arrangements are in hand for moving three others. The Kuala Lumpur office was closed down on 1st January, 1935, and all the senior and office staff concentrated in Singapore. The demands of service and civil aviation has necessitated the regular issue of forecasts twice daily for the main air route through Malaya. Co-operation with the Meteorological Services of neighbouring countries was developed during the year.

GEOLOGY.

The detailed geological survey of the area in the neighbourhood of Bidor, Batang Padang, was continued and the alluvial gold deposits of this area still receive considerable attention from miners and prospectors. The output of fine gold this year reached 6,526 ounces which figure constitutes a record.

During the last few years the Geological Survey Department has been trying to interest miners in the commercial possibilities of ilmenite, which is the dominant constituent of amang, the by-product of tin mining. This year numerous shipments have been made, but the detailed figures of the amounts exported, believed to be considerable, are not yet available.

Geological reports were furnished both on mineral deposits and on engineering schemes. The filing of prospecting results has been continued and increasing use of these records is being made both by Government officers and the mining public. The usual analyses of metals, minerals, and oils were done for the public and for Government departments, and the number of samples submitted has increased considerably during the year.

PLANTERS LOANS BOARD.

Agricultural loans.

On 1st January, 1935, the Board had outstanding twenty-seven loans aggregating to $686,345.

One new loan, $85,000, and two additional loans amounting to $51,075 were made during the course of the year, while six properties repaid their loans in full to the extent of $73,818, ten others made partial repayments totalling $56,206 and balances not required by three estates, $12,447, were written back.

At the end of the year, the number of agricultural loans was thus reduced to twenty-two totalling $679,949 against which $660,048 had actually been paid out while advances to estates under the Board's administration totalled $23,683 giving a total sum outstanding of $683,731.

Urban loans.

Urban loans, at the beginning of the year, totalled seventy-eight amounting to $709,592. No new loans were made during the year. Repayment in full was made by thirteen borrowers to the extent of $174,250, forty-seven others made partial repayments totalling $106,579 and balances not required, $14,000, were written back.

At the end of the year, the number of urban loans totalled sixty-five aggregating $414,763 while sundry disbursements (recoverable) in respect of certain of these properties amounted to $3,490 giving a gross sum outstanding of $418,253.

War Service Loans.

Under the War Service Land Grant Scheme, at the beginning of the year, fifty-four ex-soldiers were indebted to the Board, in respect of loans made to them, to the extent of $1,195,850.

No loans were repaid in full during the course of the year but partial repayments were made by sixteen borrowers to the extent of $59,400.

At the end of the year, therefore, the number of borrowers continuing to benefit under the Scheme remained the same (viz., fifty-four) and the amount outstanding totalled $1,136,450 to which falls to be added $84,687 being advances to properties under the Board's administration giving a gross sum outstanding of $1,221,137.

Interest.

Interest earned during the year amounted to $147,500 of which $48,873 was in respect of agricultural loans, $42,279 in respect of urban loans and $56,348 in respect of War Service Loans.

Interest collected totalled $142,600 while interest credited to Federal Revenue in respect of all monies outstanding was $132,600.

Profit and loss.

The net profit earned by the Board during the year was $20,310.

Reserves.

The reserves of the Board at 31st December, 1935, stood at $855,000.

Capital.

The capital of the Board is $4,000,000 created by the Planters' Loans Fund Enactment (Cap. 131).

THE ESTATE DUTY OFFICE.

The total of estate duty collected throughout the Federated Malay States in 1935 was $288,286 as against $367,902 in 1934 and $213,916 in 1933.

The collection of duty continued to be difficult. No unusually large estates were declared, and the total value of solvent estates declared and assessed during 1935 was $5,238,689 as compared with $5,034,442 in 1934 and $4,207,945 in 1933.

It would appear that the number of estate duty affidavits filed each year varies according to the general economic condition prevailing. Thus during the recent period of depression such numbers consistently fell each succeeding year. There are now indications however that conditions are gradually improving and that applications for representation are being made in respect of estates which in recent years were not considered worth administering. This, no doubt, is the explanation of the fact that although the number of affidavits dealt with during the year increased by 52 per cent. the actual value of property on which estate duty was leviable increased by 4 four cent. only.

In addition to the increase in the volume of work performed, the valuation of property continued to present serious difficulties as values have varied very considerably during recent years, and in many cases realisation of the duty when assessed involved protracted negotiations and payments by instalments over long periods.

Cases of evasion of payment of estate duty by misrepresentation and non-disclosure on the part of certain applicants for representation were investigated. As a result there is no doubt that considerable sums will be collected as estate duty in respect of property which has passed on the death of certain persons.

MILITARY.

The strength of the 2nd Bn., 20th Burma Rifles, stationed at Taiping was on the 31st December, 1935:

British officers	11
Indian officers	20
Indian other ranks	647

A high standard of efficiency was maintained. After a tour of approximately 16 years in the country the Burma Rifles are being replaced by the 1st Bn., 2nd Punjab Regiment, in February, 1936. The conduct of the Regiment throughout their tour of service has been exemplary.

The expansion of the Malay Regiment has proceeded as was anticipated and the strength on 31st December, 1935, was:

British officers	6
,, W. Os. & S/Sgts.	7
Malay other ranks	361

The training of the Battalion continued throughout the year and the big influx of recruits in February as well as the men of the earlier squads all completed the musketry courses as laid down for a British Battalion. A platoon of Machine Guns, a Signal section, and a Corps of Drums have been started. The results attained by these specialist branches have been very satisfactory. The new barracks and houses have made progress, and two Rifles Companies are now occupying two of the barrack blocks. It is anticipated that at least two Officers' quarters will be ready by the end of January.

VOLUNTEERING.

During the period under review there has been a gratifying increase in the strength of the Malay States Volunteer Regiment; their numbers have risen from 607 to 685, with a marked drop in the average age of recruits, which shows that the younger men in the country are beginning to appreciate their military responsibilities.

Despite this improvement the average age of the Volunteers is too high, and still further efforts are required, especially from civil firms if progress is to be maintained.

Early in the year the establishment of the rank and file of Malayan Volunteer Infantry Companies was increased from 100 to 130, but by the end of the year almost every company was up to strength, and in several instances companies have long waiting lists. This enables commanders to select suitable men of good physique and results in greatly increased efficiency in those companies.

Efficiency.—Whereas the economic conditions of the country are still improving, this has not yet been followed by any appreciable increase in staffs of firms and estates. Many volunteers have consequently still found it difficult to attend training and it was only possible to hold two camps of six days each for Machine Gunners of the Malay States Volunteer Regiment. The value of these camps cannot be overestimated and it is hoped that as conditions improve more volunteers will be in a position to attend them.

The feature of the year's training has been the marked improvement in all forms of weapon training in the Malay States Volunteer Regiment and the Malayan Volunteer Infantry. The most satisfactory progress was made by Malayan Volunteer Infantry units with the Light Machine Gun, a weapon with which they have only recently been equipped.

Considerable attention was paid to the training of junior leaders and satisfactory progress was made. There is still however room for improvement in this very important branch of military training especially in Malayan Volunteer Infantry Units where more practical work in section leading is required.

Administration.—The gradual accumulation of costly weapons and mobilization stores calls for ever increasing surveillance on the part of the administrative staff. During the lean years of the slump the standard of maintenance necessarily declined, but lost ground is now being made up.

At the beginning of the year a new system of ledger accountancy and store organisation was introduced and has proved most successful.

All units are being equipped to Imperial establishments as funds become available, with the essential arms and stores that could not be obtained locally on mobilization. The amalgamation of the control and finances of the Malay States Volunteer Regiment and the Malayan Volunteer Infantry has simplified this task considerably.

MALAY ADMINISTRATIVE SERVICE.

In March, 1910, a scheme for the employment of Malays in the Public Service (Higher Subordinate Class) was introduced with the object of training boys of good family to fit them for high and responsible appointments in the Government service. The officers appointed under that scheme were styled Malay Assistants. Probationer Malay Assistants were selected from boys who had passed the 7th Standard at the Malay College, Kuala Kangsar. After selection they had to undergo a three-year course of study in the College and show proficiency in official correspondence, Treasury work and other prescribed subjects before being appointed as Malay Assistant, Grade III. On promotion to Grades II and I of the scheme Malay Assistants were eligible to serve as Settlement Officers and in other appointments of similar status. There was provision for a Special Class consisting of two Magisterial appointments, three appointments of Assistant District Officer, one of Malay Assistant and one of Assistant Conservator of Forests. The salary scale of the various grades, including the Special Class, was the same as that of the General Clerical Service in force at the time. The scheme also held out hope to officers in the Special Class of promotion to higher appointments in the Civil Service, thus envisaging the possibility of further development should the work and ability of officers on the scheme justify further advancement.

The outbreak of the Great War, making it necessary for Government to free as many of its European officers as possible for military duty, resulted in a considerable increase in the numbers of Malay Assistants appointed to higher and more responsible posts, and in 1917 it was decided to introduce a new scheme which opened to the Malay Officers a well-paid administrative career. The passing of the Cadets' Law Examination was introduced into this scheme as a condition for promotion to the Special Class.

The 1917 scheme was in turn superseded in 1921 by another scheme which provided that boys educated in English schools other than the Malay College, Kuala Kangsar, should be eligible to compete for 50 per cent. of the annual number of vacancies for probationerships. There were at the time of the introduction of this revised scheme in 1921 twelve Malay Officers who were performing the duties of Civil Service appointments or of additional appointments open to Cadets. The number of Malay Officers at end of 1921 was 50 and there were in addition 23 Probationers.

The Malay Administrative Service Scheme in its present form dates from 1930. Appointments as Probationers in the Malay Administrative Service are open to Malays who have passed the Cambridge School Certificate examination and are over 18 and under 20 years of age. Vacancies are filled by the Chief Secretary to Government on the recommendation of a Selection Board, a minimum of 50 per cent. of the posts being reserved for boys from the Malay College, Kuala Kangsar. Successful candidates undergo a course of study in Law and General Orders at the Malay College, Kuala Kangsar, for a period of one year, and thereafter remain on probation for at least two years during which period they have to pass the examination in General Orders and Colonial Regulations set for Cadets of the Malayan Civil Service and also an oral examination on subjects connected with the actual work they have been doing. Thereupon they become Malay Officers, Class III, on a salary scale of $150-A10-$170 per mensem. After serving for three years in this Class and provided they have passed the examination in Law prescribed for Cadets of the Malayan Civil Service, Malay Officers are promoted to Class II on a salary scale of $200-A10-$300 per mensem. There are 22 appointments in Class II mainly consisting of Deputy Assistant District Officerships.

Malay Officers in Class II with not less than seven years' service become eligible for promotion to Class I. Promotion to Class I is not automatic or by seniority but depends on the occurrence of vacancies and is by selection according to merit and qualifications. There are 27 posts in this Class, the salary scale of which is $330-A15-$420 per mensem. Officers in Class I are called upon to function as Assistant District Officers, Second Magistrates and in other appointments of a similar status and responsibility, many of which were formerly in the cadre of the Malayan Civil Service.

The declared policy of Government is that Malay Officers of the Malay Administrative Service who by reason of their character, ability and industry have shown their fitness should be promoted to the Malayan Civil Service. Officers of Class I of the Malay Administrative Service who have served in that Class for at least three years are eligible for promotion to the Malayan Civil Service for service in the Federated Malay States only: such promotions being made by selection according to merit and depending upon vacancies in the authorised cadre. At the end of the year under review 17 Malay Officers had been promoted to the Malayan Civil Service.

GENERAL.

His Majesty the King was graciously pleased to confer the following honours:

At the New Year—

Knight Bachelor	Samuel Joyce Thomas, Esq., Chief Justice, Federated Malay States
Honorary Commander of the Most Excellent Order of the British Empire (Civil Division)	The Dato' Penghulu Mendika Mentri Akhir Zaman, Abdullah bin Panglima Muda, Undang of Jelebu
Meritorious Service Medal of the Civil Division of the Order of the British Empire	Chief Sub-Inspector Ali bin Tuah, Federated Malay States Police.

On His Majesty's Birthday—

Honorary Knight Commander of the Most Distinguished Order of St. Michael and St. George	His Highness the Sultan of Pahang, al-Sultan Abubakar Ri'ayatu'd-din al-Mu'ad-dzam Shah, C.M.G., ibni al-Marhum al-Sultan Abdu'llah

Honorary Companion of the Most Distinguished Order of St. Michael and St. George	Tengku Besar of Sri Menanti, Tengku Burhan-uddin ibni al-Marhum Yam Tuan Antah
Member of the Most Excellent Order of the British Empire (Civil Division)	Miss Josephine Foss, European Mistress, Pudu English School, Kuala Lumpur
Member of the Most Excellent Order of the British Empire (Civil Division)	Dr. Khong Kam Tak, M.A., M.B., B.ch. (Cantab.), M.R.C.S. (Eng.), and L.R.C.P. (London), Perak
Companion of the Imperial Service Order	Mohamed Noordin bin Abdul Shukor, Orang Kaya Kaya Stia Bijaya di Raja, Perak

Certificates of Honour were awarded to the following in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Che Mohamed Arshad bin Mohamed Salleh, J.P.
Raja Haji Othman bin Raja Yahya, J.P.
Dato' Perba Salleh bin Haji Mat Sah.

The year under review saw the smooth working of the first stages of the decentralisation policy set out in Sir Samuel Wilson's report. They consisted, as already stated in the report for 1934, in the transference of ten important departments of Government to State control, the promulgation of the Statutes appertaining to those departments which were enacted as State laws, and the resultant transfer of the provision for those departments from "Unreserved Services" to the State and Federal Estimates.

The financial stability of the Federation was put on a secure basis being so designed as to fit it with the second and third stages of the policy suggested by Sir Samuel Wilson; and it is hoped that what has been settled now will require little, if any, modification as years go by and the country passes through those stages. In the first place, the Finance Committees of the Federal and State Councils have been greatly strengthened, and no supplement, however small, may now be approved without reference to them. In order, however, to expedite the despatch of public business without imposing undue inconvenience on members, a sub-committee of the Finance Committee of the

Federal Council has been set up consisting of the Treasurer as Chairman and three unofficial members, with power to deal with all applications to the Federal Government for supplementary votes not exceeding $20,000 on any one item and with power also to consider applications exceeding $20,000 and to make recommendations to the full Finance Committee in regard to them. The full Finance Committee has still the right to question any supplement which has been passed by the sub-committee. The powers of the Finance Committee of the State Councils have been so fixed that the spending of the block grant made to each State by the Federal Council at the beginning of each year shall be unfettered. But, in matters which affect or are likely to affect Federal finance or to involve an increase in the block grant, such as the creation of a new head of expenditure, additions to the fixed establishment, alterations of the established salaries, provision for new items of special expenditure estimated to cost over $20,000, prior reference to the Finance Committee of the Federal Council is necessary. Secondly, it has been laid down as part of the financial policy that the High Commissioner upholds the authority of the Treasurer and Auditor as laid down in the General Orders. It is the duty of these officers to see that no expenditure is unnecessary or extravagant, and that the laws, regulations and instructions in all matters of finance and accounts are strictly observed and that any failure is brought to notice.

Another important change in the political structure of the Federation was the abolition of the post of Chief Secretary to Government and the substitution of a post of Federal Secretary, ranking as a Class IA appointment in the Malayan Civil Service. The office carries a seat on the Federal Council and in precedence comes next after the Residents. The duties of the post of Federal Secretary in purely Federal matters comprise all those which ordinarily appertain to an office of Chief or Colonial Secretary. He is the High Commissioner's mouthpiece, and will settle questions referred to him by Federal departments in accordance with what he believes to be the wishes of the High Commissioner or will refer them for instructions. In State matters he is entitled to give approval to requests emanating from the Residents, in so far as he is able to do so without reference to the High Commissioner in order that the time of the High Commissioner may be saved; but he cannot of himself disapprove without prior reference. If a question is raised which affects other States, he will refer it to them, and to any department concerned, and prepare a complete case for submission to the High Commissioner. He is entitled to point out to a British Resident or to the High Commissioner any ruling which affects the matter at issue.

The above changes were effected on the 24th February, 1936, and thus it devolved on the writer who is the first incumbent in the new post of Federal Secretary, to prepare this report of the Chief Secretary to Government for the year 1935.

The year under review was marked by an outstanding event in the Silver Jubilee of His late Majesty King George V. It was considered desirable that a record should be compiled of this memorable occasion and accounts of the celebrations were accordingly drawn up and published as a Federal Council Paper.

A notable event in the history of the Federation took place in February when the territory of the Dindings was restored to Perak.

The import duty on rice and padi was removed on the 1st May.

The financial position of the country during the year, though still far from secure, continued to improve. Satisfactory though the recovery undoubtedly is, it should be borne in mind that it has been brought about largely by restriction of output of the country's two staple products, and so long as this restriction continues and the international prospect remains so uncertain, economy in expenditure and the careful husbanding of resources are still essential.

Mr. M. B. Shelley, C.M.G., continued to act as Chief Secretary to Government until the 4th April when he proceeded on leave prior to retirement, and he was succeeded by Mr. M. Rex who held the post for the rest of the year and until it was abolished in February, 1936.

KUALA LUMPUR,
10th August, 1936.

C. D. AHEARNE,
Federal Secretary, F.M.S.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,337	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,685	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801; that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888	23,720	1,395,923	2,790,451	9,469,446	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	14,000,633	118,590	8,667,274	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,583,799	160,213	11,192,715	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,180	17,704,014	127,593	8,575,863	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,037,720	174,490	3,712,752	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584‡	84,660,975¶	201,393,405	349,012,595	67,042	15,420,646	261,352	4,313,743	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870‡	82,470,192¶	168,020,418	213,652,044	62,065	9,121,971	249,675	1,084,440	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659‡	62,163,328¶	106,201,211	125,177,183	51,250*	5,501,733	243,886	543,778	4,832,700	12,012,579	1,723,117§	1931
1932	43,817,151‡	53,740,139¶	71,133,301	87,851,281	27,091*	3,594,022	235,898	376,380	4,268,125	9,483,859	1,770,486	1932
1933	47,198,806‡	50,258,671¶	67,129,150	111,885,935	22,824*	4,886,683	248,356	577,406	3,989,363	9,036,776	1,597,770	1933
1934	58,926,323‡	47,211,228¶	84,731,059	202,725,341	36,385	8,886,234	256,516	2,160,157	5,141,756	11,284,147	1,631,728	1934
1935	62,364,264‡	51,119,943¶	87,102,149	186,770,827	40,748	9,700,616	194,478	2,247,497	5,593,334	11,871,097	1,777,421	1935

‖ Excluding bullion and specie. § *Vide* foot-note on page 138. † The figures for previous years included items now omitted owing to reclassification of revenue. ‡ Exclusive of Railway receipts. ¶ Exclusive of Railway expenditure. * The tonnage for the years 1931, 1932 and 1933 was based on 72% tin content of ore and not on the true assay value, viz., 75.5%.

APPENDIX B.

STRAITS SETTLEMENTS STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1935.

Dr. *Cr.*

—	6 per cent.	—	—	—
	$ c.	$ c.		$ c.
To Loan Expenses—			By Loan Subscription—	
Interest on Deferred instalments ...	268,092 28			
Composition Stamp Duty	552,321 42		6 per cent. 1936-51 issued at £97 in December, 1921 ...	44,185,714 29
Discount on Issue Price	1,325,571 43			
Underwriting Commission	441,857 14			
Commission for obtaining Underwriting	110,464 29			
Crown Agents' Commission	110,464 29			
Brokerage to Sundry Brokers and Bankers on allotment of Stock ...	108,049 28			
Miscellaneous—				
Stamp, etc.	5,873 21			
Advertisement	31,052 18	2,953,745 52		
To Loan Works	...	40,740,792 15		
To Balance	...	491,176 62		
		44,185,714 29		$44,185,714 29

Appendix C.

F.M.S. LOCAL LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1935.

Dr.	$ c.	$ c.	Cr.	$ c.
To Loan Expenses—			By Loan Subscription—	
(*a*) Discount on issue price ...	320,000 00		4½ per cent. issued at 98 in May, 1931	16,000,000 00
(*b*) Commission and charges ...	40,000 00	360,000 00		
To Loan Works...	...	11,160,635 70		
To Balance	...	4,479,364 30		
		16,000,000 00		16,000,000 00

Appendix D.

F.M.S. STERLING LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1935.

Dr.	$ c.	$ c.	Cr.	$ c.
To Redemption of 4½ per cent. S.S. Sterling Loan 1935-45—			By Loan Subscription—	
Total Loan raised	36,000,000 00		3 per cent. 1960-70 issued in June, 1935	34,285,714 29
Less redeemed from revenue account	1,714,285 71	34,285,714 29		
		34,285,714 29		34,285,714 29

APPENDIX E.

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

	Cost. $ c.	Where obtainable.
Census Report, British Malaya, 1931	5 00	Printing Department, Kuala Lumpur, Federated Malay States.
Handbook of British Malaya	1 50	Printing Department, Kuala Lumpur, Federated Malay States.
The Oil Palm in Malaya	2 00	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
An Outline of Malayan Agriculture	3 00	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 60	Printing Department, Kuala Lumpur, Federated Malay States.
Treaties and Engagements affecting the Malay States and Borneo	3 50	Printing Department, Kuala Lumpur, Federated Malay States.
Geology of Malayan Ore Deposits	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Geology of Malaya	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free	Malayan Information Agency, 57, Charing Cross, London.

APPENDIX E—(*cont.*)

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES—(*cont.*).

	Cost. $ c.		Where obtainable.
Fisheries of British Malaya ...	5 00	...	Printing Department, Kuala Lumpur, Federated Malay States.
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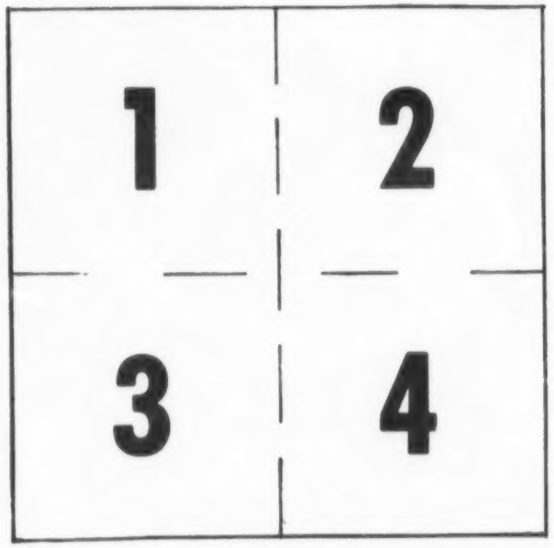

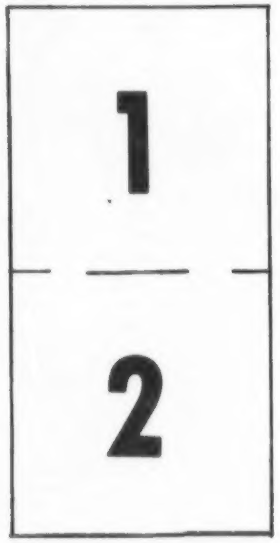

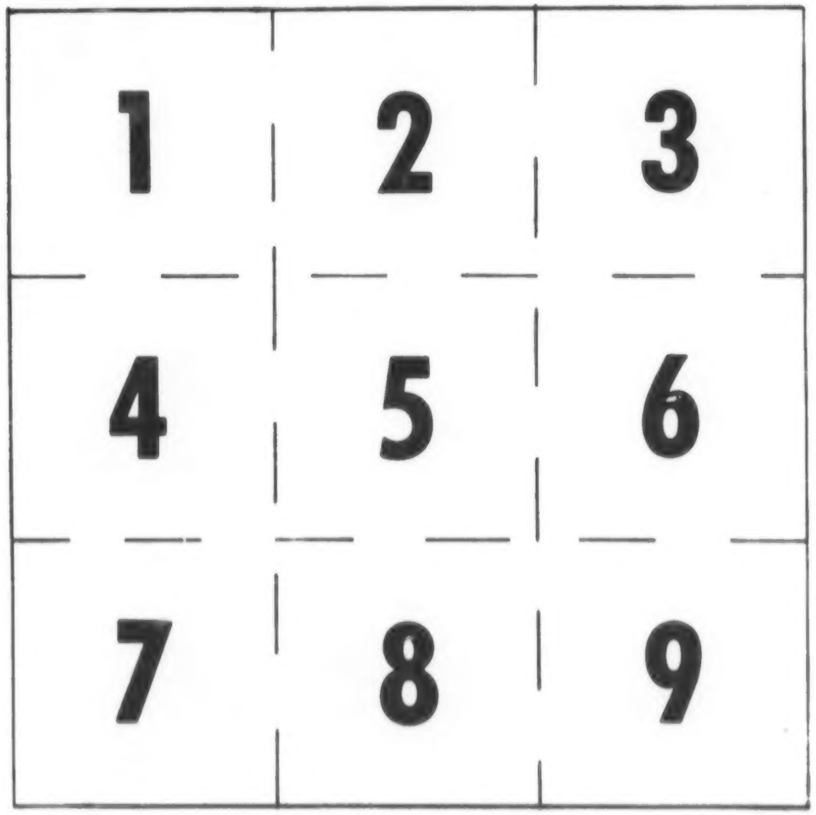

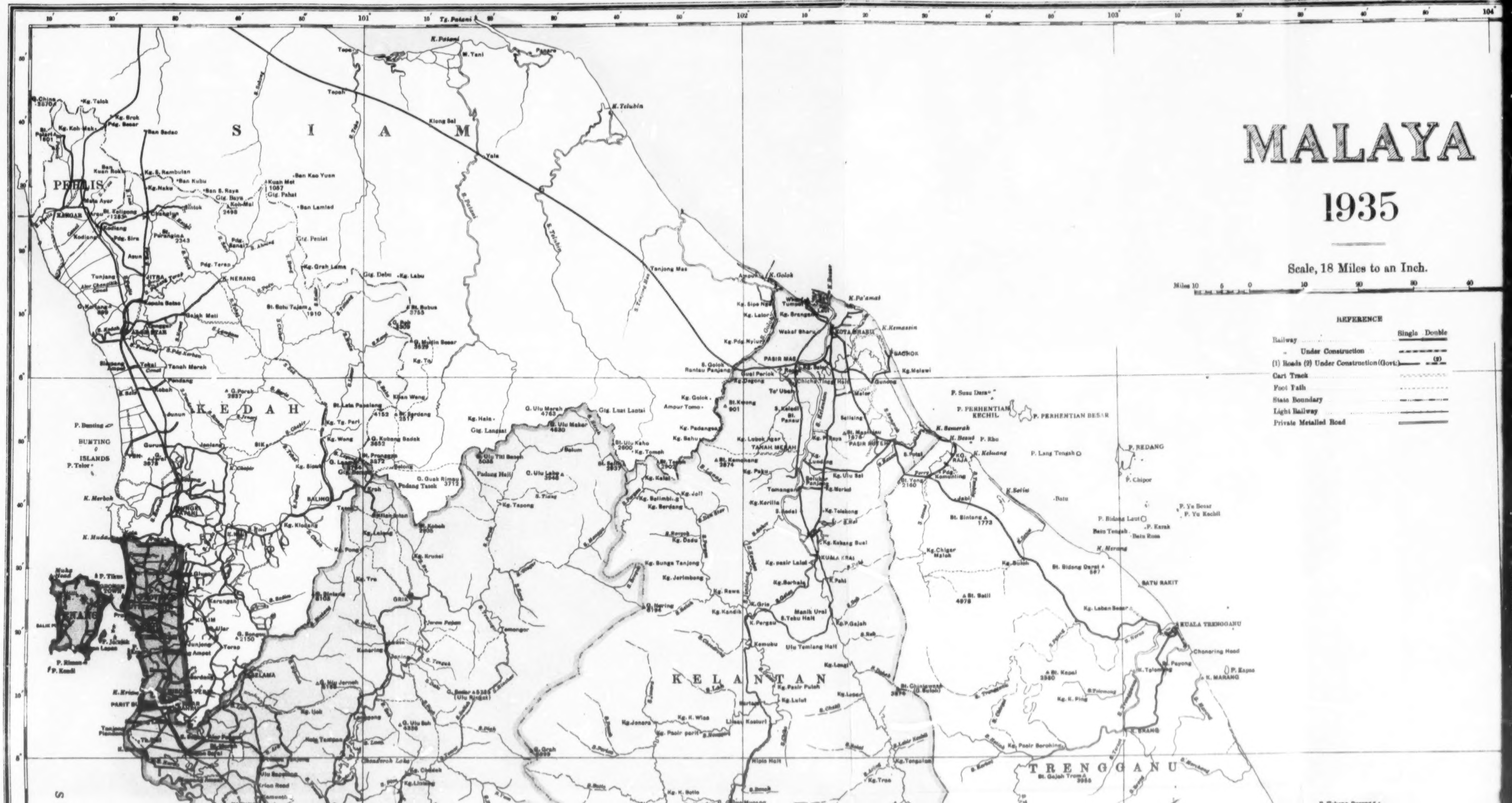
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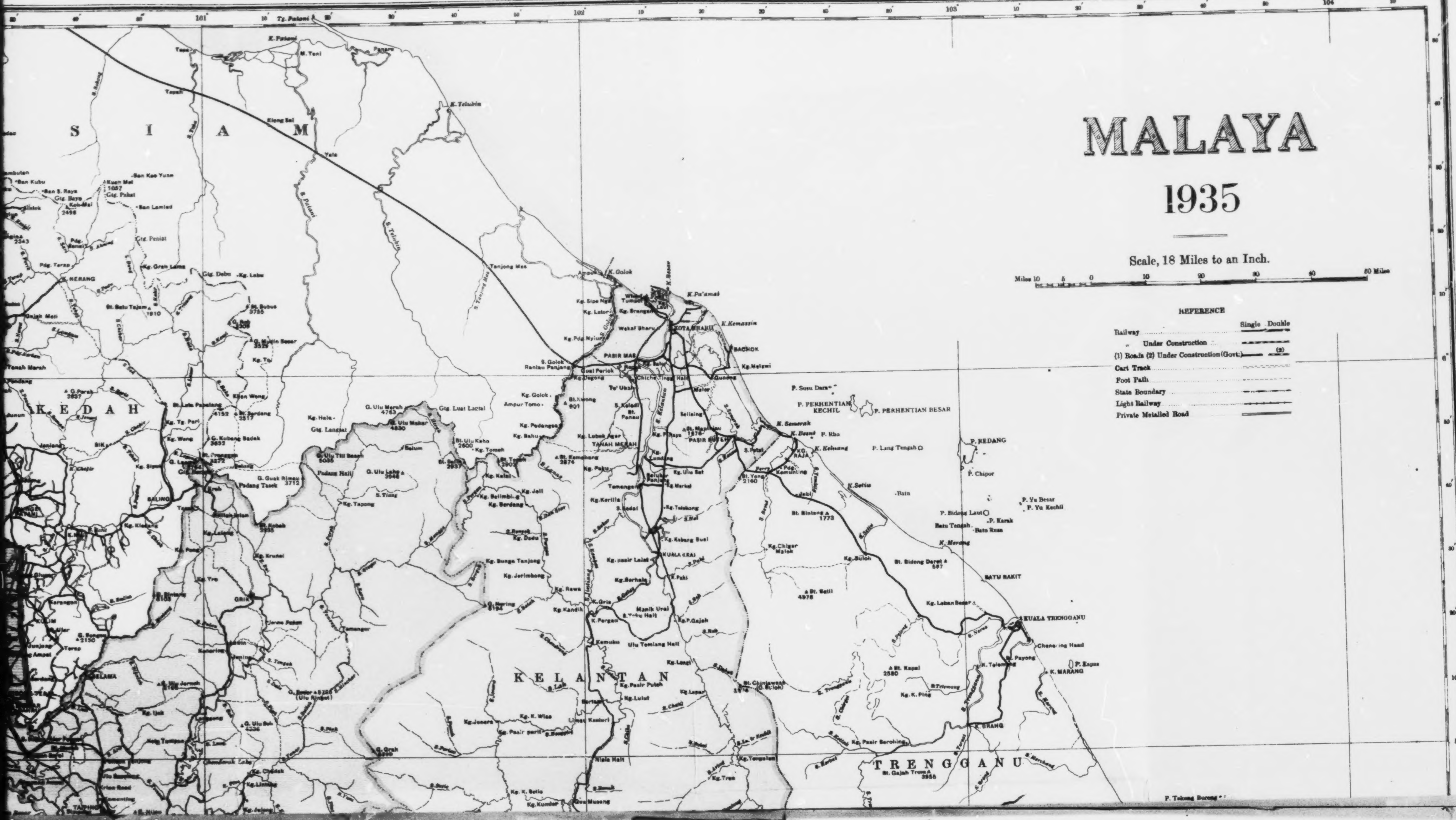
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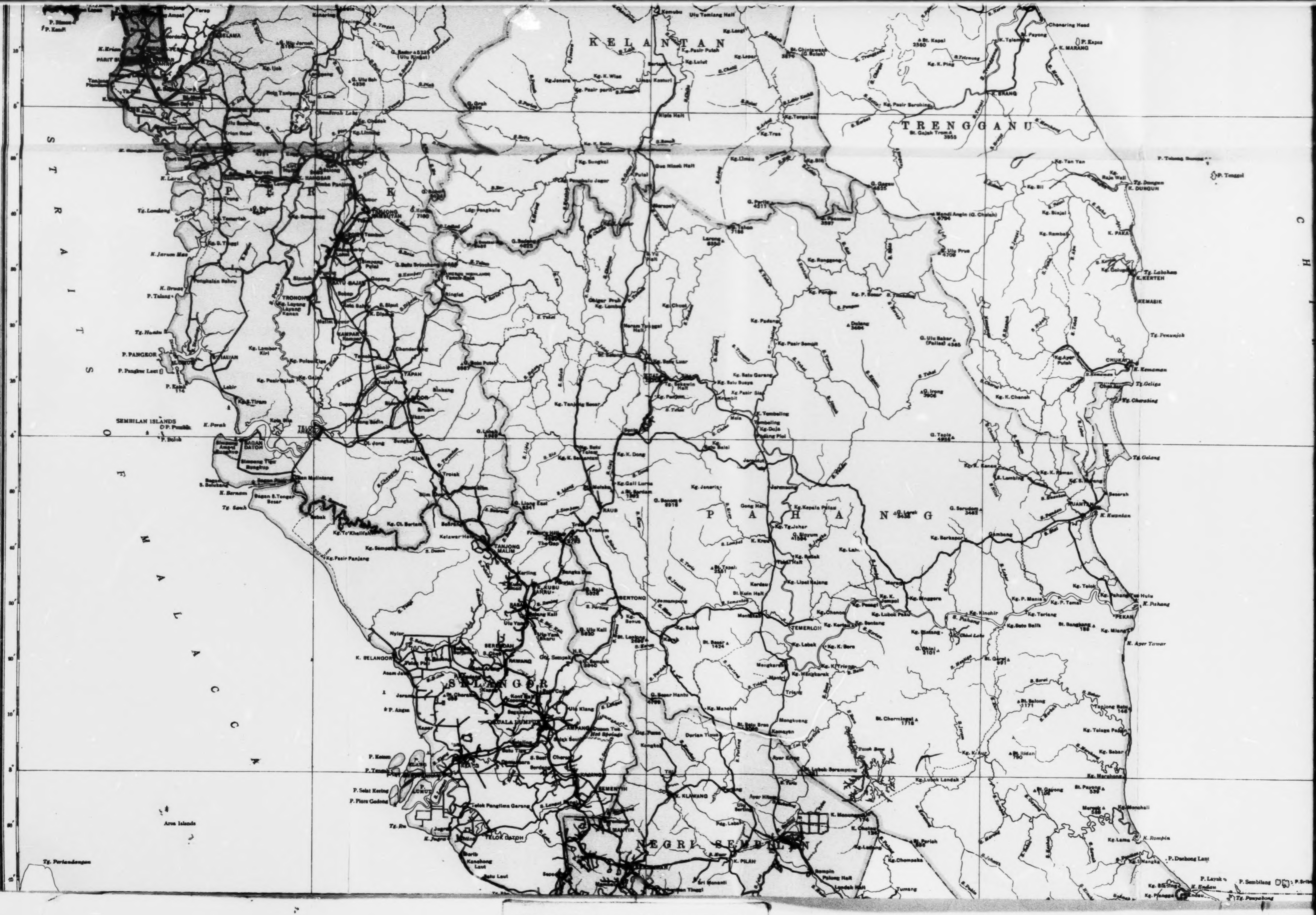

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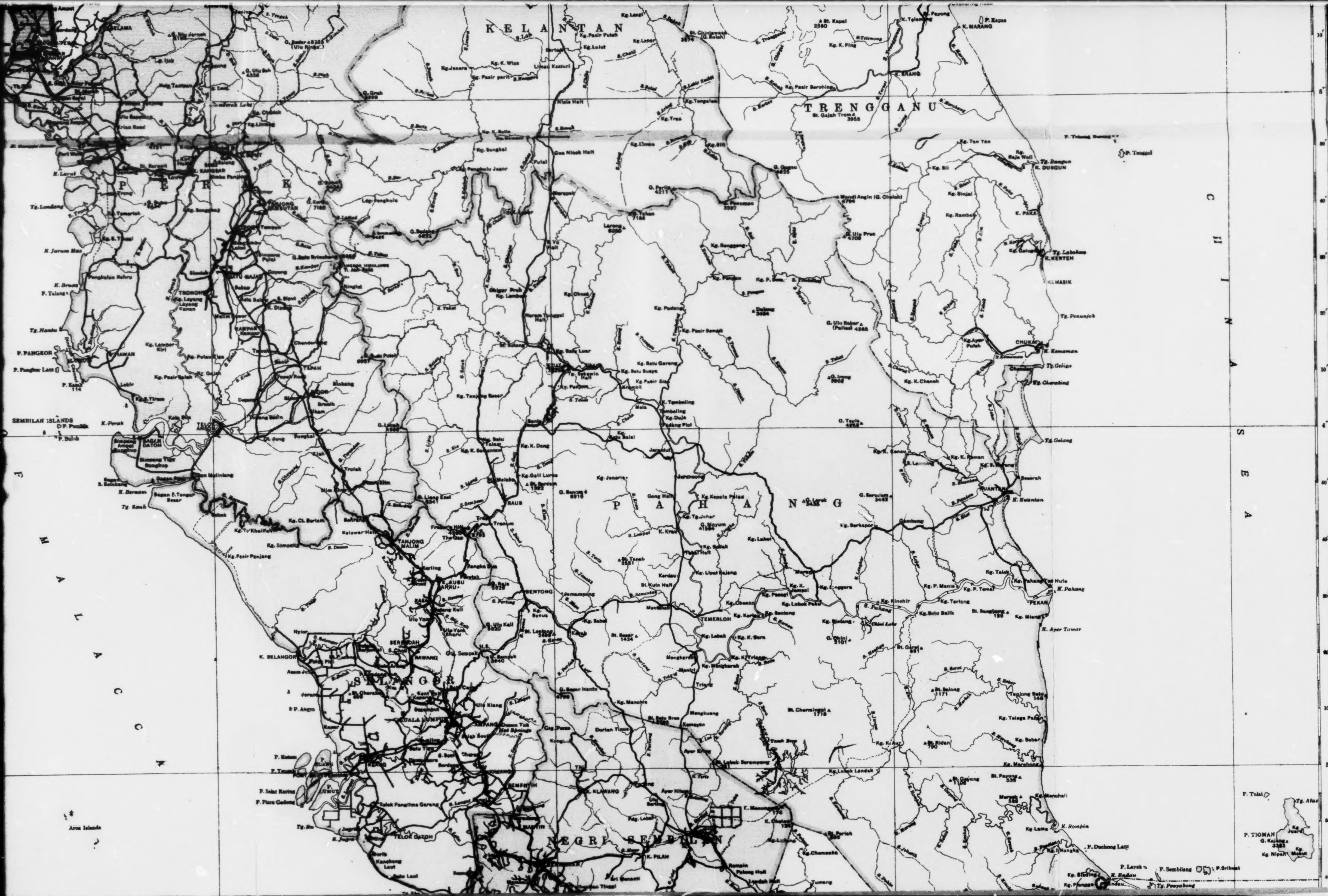
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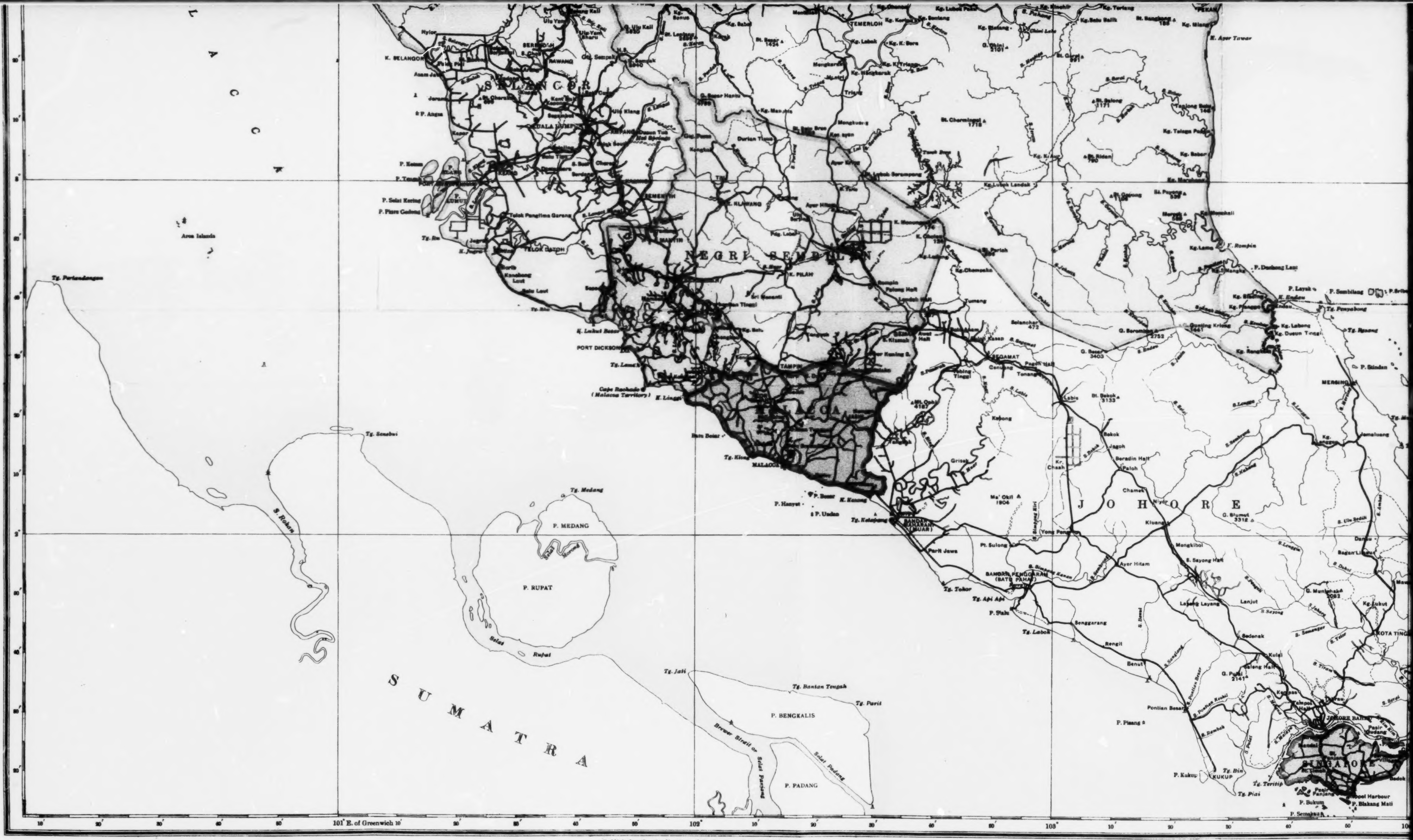
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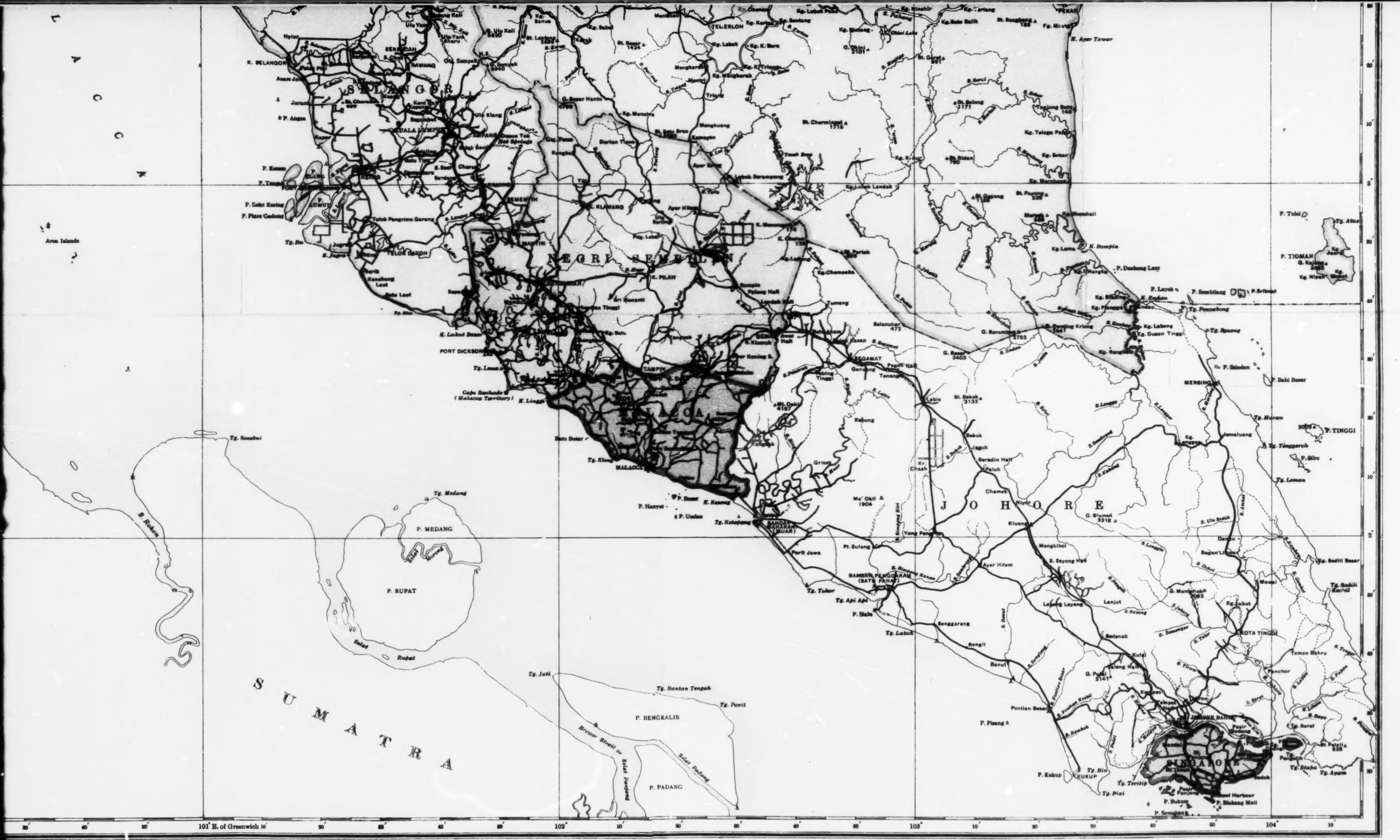
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CHAPTER I.

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The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,980 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor

Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom".

By an Act of Parliament which received the Royal Assent on the 16th November, 1934, the territory of the Dindings was restored to Perak and has formed part of the State since the middle of February, 1935. The present Ruler of the State is His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., ibni Al Marhum Al Sultan Idris.

SELANGOR.

Selangor (3,160 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. The present Ruler is His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., K.C.V.O., ibni Al-Marhum Raja Muda Musa.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,580 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungei Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungei Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Tuanku Abdulrahman, K.C.M.G., ibni Al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 13,820 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, K.C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15°F. at coastal stations and between 15° and 20°F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December, followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 235 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 110 inches and Cameron Highlands 107 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtained at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 53°F. and at Tanah Rata 42°F. or only 10°F. above freezing.

CHAPTER II.

Government.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

The State Council of Negri Sembilan comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undang, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undang for amendment or confirmation, and assent is finally given by His Highness and the Undang. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer styled Resident-General (a title later altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements who became ex officio the High Commissioner for the Malay States. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected.

In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State.

In 1927 the Federal Council was reconstituted and the Rulers withdrew from active participation in the deliberations of the Council; and the Council was enlarged by the addition of a number of official and unofficial members.

During the year under review an important change was made in the political structure of the Federation, as a further step towards decentralisation, by the abolition of the post of Chief Secretary to Government and the substitution of a post of Federal Secretary, ranking as a Class IA appointment in the Malayan Civil Service. The office carries a seat on the Federal Council and in precedence comes next after the Residents. The duties of the post in purely Federal matters comprise all those which ordinarily appertain to an office of Chief or Colonial Secretary. In matters appertaining purely to the States he is the channel of communication between the States and the High Commissioner. This change was effected on the 24th February, 1936.

The Federal Council consisted in 1936 of the High Commissioner as President; the four British Residents; the Federal Secretary; the Legal Adviser; the Financial Adviser; the Adviser on Medical Services; the Controller of Labour; the General Manager for Railways; the Adviser on Education; the Commissioner of Customs and Excise; the Secretary for Chinese Affairs; the Adviser on Agriculture; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. Certain laws relating to departments, which under the decentralisation policy have been transferred to State control, though affecting more than one State are however passed by the State Councils. The Federal Council retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 25 districts in each of which there is a Sanitary Board, a Licensing Board, and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The population of the Federated Malay States on the 30th June, 1936, was estimated to be 1,847,951, an increase of 70,530 on the figure for 1935. This estimate was based on the 1931 census, brought up-to-date by including the balance of births and deaths, and of immigration and emigration. The increase of 70,530 over last year is made up of 35,976 on account of the balance of births over deaths, and the remainder from immigration.

Immigration has had far less influence on the vital statistics for 1936 than in 1935. During the twelve months ending in June, 1936, the population has increased, by the balance of immigration over emigration, only to the extent of about 35,000 as against 100,000 the previous year.

The population represents :

ESTIMATED POPULATION—MID-YEAR 1936.

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.	Total.
Perak	304,683	347,151	168,768	3,032	6,459	830,093
Selangor	137,116	260,256	164,842	3,594	9,967	575,775
Negri Sembilan ...	96,402	97,750	51,481	1,065	3,155	249,853
Pahang	119,456	55,920	14,989	474	1,391	192,230
Total ...	657,657	761,077	400,080	8,165	20,972	1,847,951

The sex ratio for the Federated Malay States as a whole was 142 males to 100 females. The ratio for Indians was slightly higher than in 1935, namely, 187 males to 100 females, as against 185 in 1935. There has been a further improvement in the Chinese population which now has a ratio of 162 males to 100 females, compared with 165 to 100 in 1935.

The estimated population at the end of the year was 1,887,150, an increase of 39,199.

BIRTHS.

There were 71,504 births registered during the year, an increase of 7,783 or 12.2 per cent. over the figure for 1935.

The birth-rate was 38.7 per mille compared with 35.9 per mille in 1935. The birth-rate for each race increased in every State, being most marked amongst Malays whose rate for the Federated Malay States increased from 37.5 in 1935 to 43.4. It is of interest to note that the birth-rates for the Malays and for the total population, are the highest ever recorded.

Of the total births, 37,548 were males and 33,956 females, giving a birth sex ratio of 111 males to 100 females: the ratio for 1935 was 109 males to 100 females.

Births of children of Chinese race still exceeded those of Malays in the Federated Malay States as a whole, but in proportion to their respective populations the Malay birth-rate was higher.

DEATHS.

There were 35,528 deaths recorded in 1936, an increase of 161 or 0.45 per cent. over 1935.

The crude death-rate was 19.2 per mille which compares favourably with the rate of 19.9 per mille in 1935 and 21.4 per mille in 1934.

The increase in birth-rate and the decrease in death-rate were due to two factors, influx of adult population during 1936 and improvement in public health.

The death-rates show a marked general improvement except amongst Malays in Perak, Selangor and Negri Sembilan, where the rate has increased. This increase, however, was slight, being 0.5 per mille for the whole of the Federated Malay States and was more than accounted for by the increased number of births. There was a sharp drop in the Indian death-rate in Selangor, possibly due to the decrease in malaria. The Indian rate in Pahang was still high but considerably improved as compared with 1935.

The Registrar-General draws attention to the sex distribution of deaths at the different ages. During childhood, 1-14 years, the mortality amongst females was still proportionately too high amongst Malays and Indians, and in the child bearing years, 15-34, the excess of female deaths was alarming. In the case of Indians, it must be remembered that in this adult group the ratio of the sexes, though it could not be estimated absolutely, was in the region of 1½ to 2 men to 1 woman; and the comparative figure for female to male mortality, with correction for population, was about 2 to 1. The only explanation of this would appear to be a low standard of nutrition, early marriage and lack of proper attention during pregnancy and child birth. The figures for the Chinese for the same age groups, corrected for sex ratio in the population, were within reasonable limits, the ratio being about 11 to 10.

The maternal mortality rate was 10.1 per 1,000 births, compared with 9.5 in 1935 and 9.8 in 1934. By States the rate was fairly constant, but by race exceptional maternal mortality was disclosed amongst Malays (13.2) and Indians (14.9). The Chinese rates of 4.9 for the Federated Malay States can be compared with the English rate of just under 4.

INFANT MORTALITY.

After a marked rise in 1934, infant mortality declined to 142 per mille in 1936, a rate slightly lower than that for 1935 and much lower than the 1934 rate which was 163. The rate for Malays in Perak increased from 144 to 162 per mille, but it was still a big improvement on the 1934 figure of 192. The infant mortality rate for the State of Perak as a whole was 142, compared with 138 per mille for last year.

The lowest rate in 1936 was for Chinese in the State of Perak—123 per mille—and the next for Indians in the State of Selangor and for Malays in the State of Negri Sembilan—129 per mille.

A comparison of the infant mortality rates of the five large towns in the Federated Malay States offers an index of health conditions which is derived from known and reliable data :

INFANT DEATHS PER MILLE.

	1936.	1935.	1934.
Kuala Lumpur ...	131 ...	133 ...	147
Ipoh	96 ...	96 ...	95
Taiping	144 ...	161 ...	186
Seremban ...	144 ...	158 ...	177
Kuala Lipis ...	114 ...	187 ...	139

It is gratifying to note that there has been a considerable improvement in Kuala Lipis on the figures for 1935 and 1934, and a slight improvement in three other towns. It is difficult to offer any explanation for the disparity between the figures for these towns in all of which Infant Welfare Centres are functioning.

TABLE I.

BIRTH-RATE IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1927-1936, PER MILLE.

Year.	Malays.	Chinese.	Indians.	All races.
1927	35.9	30.7	23.5	30.5
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	31.9	35.0	34.0
1933	39.3	33.1	34.6	35.5
1934	37.8	35.1	33.2	45.4
1935	37.5	37.4	32.1	35.9
1936	43.4	38.5	33.3	38.7

TABLE II.

SUMMARY OF BIRTH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1936.

State.	Malays.	Chinese.	Indians.	Others.	All races.
Perak	44.1	36.5	31.3	11.8	38.0
Selangor	42.5	41.0	34.3	11.7	38.7
Negri Sembilan	46.4	36.8	36.7	9.5	40.0
Pahang	40.2	42.8	33.0	2.1	40.0
F.M.S.	43.4	38.5	33.3	10.8	38.7

TABLE III.

DEATH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1927-1936, PER MILLE.

Year.	Malays.	Chinese.	Indians.	All races.
1927	26.4	34.1	32.9	30.7
1928	24.4	30.6	30.2	28.0
1929	21.8	29.6	23.4	24.6
1930	20.4	30.4	21.8	24.1
1931	18.8	18.9	20.5	19.1
1932	19.1	18.3	18.9	18.5
1933	22.0	19.3	19.7	20.2
1934	23.7	20.9	19.7	21.4
1935	21.0	19.8	19.5	19.9
1936	21.5	18.5	18.0	19.2

TABLE IV.

SUMMARY OF DEATH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1936 AND 1935.

State.	Malays.		Chinese.		Indians.		All races.	
	1936.	1935.	1936.	1935.	1936.	1935.	1936.	1935.
Perak	23.4	21.5	18.1	19.5	18.7	19.4	20.0	20.1
Selangor	19.3	18.0	18.8	19.6	15.7	18.0	17.7	18.4
Negri Sembilan ...	20.8	20.3	17.3	19.3	20.9	21.2	19.1	20.0
Pahang	19.6	23.7	21.6	23.1	23.9	27.3	20.4	23.6
F.M.S. ...	21.5	21.0	18.5	19.8	18.0	19.5	19.2	19.9

TABLE V.

SUMMARY OF DEATHS FROM ALL CAUSES AT DIFFERENT AGES IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1936.

State.	Age Groups.								Grand total.
	Under 1 year.	1-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	
Perak	4,488	2,057	664	659	1,339	1,698	1,608	4,130	16,643
Selangor	3,065	1,183	355	391	867	1,051	919	2,362	10,193
Negri Sembilan ...	1,440	516	185	195	390	544	510	997	4,777
Pahang	1,179	486	178	137	296	414	374	851	3,915
Total ...	10,172	4,242	1,382	1,382	2,892	3,707	3,411	8,340	35,528

TABLE VI.

SUMMARY OF INFANT MORTALITY RATES IN THE FEDERATED MALAY STATES ACCORDING TO STATES AND RACES FOR THE YEAR 1936, PER THOUSAND BIRTHS.

State.	Malays.		Chinese.		Indians.
Perak	162	...	123	...	139
Selangor	136	...	143	...	129
Negri Sembilan ...	129	...	162	...	148
Pahang	150	...	166	...	130
Average rate ...	149	...	139	...	136

TABLE VII.

INFANT MORTALITY RATES. ALL NATIONALITIES, 1936.

State.	Infant deaths.	Births.	Infant mortality rates.
Perak	4,488	31,510	142
Selangor	3,065	22,302	137
Negri Sembilan	1,440	9,998	144
Pahang	1,179	7,694	153
F.M.S.	10,172	71,504	142

TABLE VIII.

SUMMARY OF INFANT MORTALITY RATES (ALL STATES AND ALL RACES) IN THE FEDERATED MALAY STATES FOR THE PERIOD 1927-1936.

Year.	Infant mortality rate per mile.
1927	203
1928	182
1929	178
1930	163
1931	139
1932	137
1933	146
1934	163
1935	144
1936	142

CHAPTER IV.

Health.

The general health of the people remained satisfactory during the year although there was an increase of 161 deaths or 0.45 per cent. over the figure for 1935.

There was again an increase of admissions to the Government hospitals during the year after a steady decrease since 1932, as shown below :

1932	85,978
1933	76,297
1934	75,916
1935	92,276
1936	98,551

The increase was to some extent caused by the increase in population due to immigration.

If the infant mortality rate may be regarded as a sensitive index of general health conditions then the general health may be considered satisfactory, as the sudden rise in the infant mortality rate for 1934 from 146 per mille in 1933 to 163 per mille, declined to 144 per mille in 1935 and to 142 per mille in 1936.

There is evidence of a further improvement in public health, shown in the total death-rate and the infant mortality rate. The general death-rate has not been influenced to the same extent by migration as in 1935. It is satisfactory to report that the crude death-rate declined to 19.2 per mille, compared with 19.9 in 1935, and that the infant mortality rate has fallen from 144 in 1935 to 142 per mille in 1936.

SUMMARY OF PRINCIPAL CAUSES OF DEATHS IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1936.

State.	Causes of Deaths.												
	Malaria fever definitely diagnosed.	Enteric fever.	Dysentery.	Small-pox.	Diphtheria.	Cholera.	Plague.	Cerebro-spinal fever.	Tetanus.	Tropical typhus.	Influenza.	Probable malaria and fever unspecified.	Tuberculosis of respiratory system.
Perak ...	386	29	156	...	12	...	...	3	103	5	20	6,709	580
Selangor ...	182	15	164	...	26	...	...	6	89	6	10	2,724	384
N. Sembilan ...	208	13	64	...	7	...	...	...	26	5	4	1,504	234
Pahang ...	139	3	26	...	3	...	...	...	15	...	6	1,519	189
Total ...	915	60	410	...	48	...	...	9	233	16	40	12,456	1,387

State.	Causes of Deaths.											
	Other forms of tuberculosis.	Syphilis.	Ankylostomiasis.	Cancer.	Beri-beri.	Diseases of the heart.	Other diseases of circulatory system.	Bronchitis.	Pneumonia (all forms).	Other diseases of respiratory system.	Diarrhoea and enteritis.	Other diseases of digestive system.
Perak	65	47	15	92	66	336	43	173	970	219	391	378
Selangor ...	32	44	17	80	124	193	145	282	750	59	568	268
N. Sembilan ...	1	14	2	19	79	94	31	147	388	21	255	56
Pahang ...	3	5	1	6	70	45	21	35	162	174	72	125
Total ...	101	110	35	197	339	668	240	637	2,270	473	1,286	827

State.	Causes of Deaths.									
	Convulsions.	Diseases of nervous system and sense organs.	Non-venereal diseases of genito-urinary system.	Diseases of pregnancy, child-birth and puerperal state.	Premature birth and diseases of early infancy.	Old age or senility.	Violence (all forms).	Leprosy.	Other causes.	Total.
Perak	2,134	140	164	308	466	1,201	341	5	1,806	16,643
Selangor ...	1,500	108	143	240	529	897	346	3	259	10,193
N. Sembilan ...	670	29	80	92	181	282	142	...	129	4,777
Pahang ...	441	26	23	81	132	166	80	...	347	3,915
Total ...	4,745	303	410	721	1,308	2,546	909	8	1,821	35,528

PREVAILING DISEASES.

Malaria.—There was a decrease in the number of recorded cases of malaria in the States of Perak, Selangor and Negri Sembilan, and a slight increase in the State of Pahang. The total number of cases admitted to Government hospitals during the year was 20,334, compared with 21,975 cases in 1935, and 15,786 cases in 1934.

All cases of malaria admitted to hospital are accurately diagnosed and the number of such cases may therefore be regarded as a reliable index of the disease.

Anti-malaria measures throughout the Federated Malay States have been maintained as adequately as the need for economy permitted. It is clear that anti-malaria measures must not only be maintained but intensified if this improvement is to be maintained.

Distribution of quinine through the agency of schools, village headmen and departmental staff, was continued on a large scale.

Dysentery, Diarrhoea and Enteritis.—This group was responsible for 1,696 deaths or 4.7 per cent. of total deaths. In 1935 and 1934, the percentages were 4.7 per cent. and 4.0 per cent. respectively.

Pneumonia.—This condition was again responsible for the greater number of deaths due to diseases of the respiratory system and accounted for 2,270 deaths or 6.3 per cent. of the total number of deaths. This rate shows an increase of 51 over the figure for last year. In 1935 and 1934, the figures were 2,219 and 1,793 deaths, respectively.

Tuberculosis.—Tuberculosis in various forms was responsible for 1,488 deaths, of which 101 were due to the non-pulmonary type, giving a percentage of 4.2 per cent. of the total deaths, compared with 1,441 deaths in 1935 and 1,374 deaths in 1934.

Leprosy.—Sungei Buloh Settlement.—There were 1,593 patients at the beginning of the year, as compared with 1,320 at the beginning of 1935. The number increased to 1,830 at the end of the year. The total number treated in the settlement during the year amounted to 2,142.

The number of patients discharged as bacteriologically negative and free from signs of active lesions was 50, compared with 51 last year. The most important factor in the reduction in discharges is that it has been found necessary to retain at Sungei Buloh "burnt out" cases of leprosy, who are no longer infective, but who are disfigured with the scars and crippled with the deformities of the disease.

Two hundred and fifteen patients were re-admitted during the year.

Leper Asylum, Kuala Lumpur.—This contains a diminishing number of chronic and incurable lepers who are opium smokers. No additions have been made to their number since 1931, except for leper staff temporarily transferred from Sungei Buloh. The population was 219 at the beginning of the year and 200 at the end of 1936.

Venereal Diseases.—The number of patients for venereal diseases in Government hospitals and clinics is still declining. The total number of cases of venereal diseases treated in the Federated Malay States in each of the last eight years was:

Year.	Total cases treated.
1929	40,802
1930	35,734
1931	31,817
1932	25,207
1933	23,176
1934	19,704
1935	18,422
1936	17,741

HOSPITALS AND OTHER MEDICAL INSTITUTIONS.

The following table shows the average daily number of patients in the hospitals of each State, the total number of patients admitted during the year, the total number of deaths, and the death-rate for the years 1935 and 1936:

State.	Average daily No. of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1935.	1936.	1935.	1936.	1935.	1936.	1935.	1936.
Perak	1,523	1,652	39,890	43,308	3,219	3,337	8.07	7.71
Selangor	982	1,029	23,992	25,846	1,886	1,917	7.86	7.41
Negri Sembilan ...	731	763	15,976	15,780	1,102	1,194	6.88	7.56
Pahang	462	506	12,495	13,617	753	813	6.0	5.97
Total ...	3,698	3,950	92,353	98,551	6,960	7,261	7.20	7.36

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries), apart from those treated at special institutions such as infant welfare centres, venereal disease clinics, etc., was 714,560; the corresponding figure for 1935 was 653,430.

INFANT WELFARE CENTRES.

The work at the Infant Welfare Centres and clinics was continued successfully. The total number of attendances at the various clinics numbered 160,786.

The three centres started in Pahang in 1934, connected with the hospitals at Kuala Lipis, Kuantan and Pekan, have become very popular. The special centre on the East Coast of Pahang has made excellent progress. The Lady Medical Officer visited the kampongs to attend on the maternity cases and the increased number of attendances showed appreciation. The centres are in charge of a Lady Medical Officer or a Sister assisted by a staff of Asiatic nurses.

The educational side of the centres continued to be of primary importance and every effort was made to continue lectures and practical demonstrations.

Ante-natal work is being carried out on an increased scale, and includes physical and laboratory examination as well as arrangements for dental treatment. The principal function of the clinics, however, is to teach mothers how to look after their children properly. The health visitors visit the homes of newly-born infants, and later encourage the mothers to come to the centres. Health visitors are well received everywhere. At all centres, the majority of those who seek advice are Chinese.

CENTRAL MENTAL HOSPITAL.

The number of patients on the 31st December, 1935, was 2,620. The number of admissions during the year totalled 1,087. This is the largest number ever admitted in one year and is the first time more than 1,000 cases have been admitted in one year. In 1935 and 1934, the admissions were 963 and 881, respectively. The number remaining at the end of the year 1936 was 2,626.

ADMISSIONS.

Males.		Females.		Total.
808	...	279	...	1,087

The most common forms of mental disorder among the admissions were:

Confusional insanity	459
Senile dementia	214
Dementia praecox	113
Melancholia	92

Eight hundred and sixty-three patients were discharged during the year. Two hundred and twenty-two patients were discharged as recovered; a recovery rate of 20.4 per cent. on the total admissions. This is lower than the recovery rates for 1935 and 1934, which were 29.1 per cent. and 32.69 per cent. Five hundred and twenty-four were discharged as relieved and 117 as unimproved. The total of those discharged as recovered or relieved gives a percentage of 68.5 on the number of admissions.

Two hundred and five patients died during the year. This is 19 more than the previous year and gives a death-rate of 5.53 per cent. on the total treated.

The general health of the patients was good throughout the year. There was a decrease in the number of cases of malaria; 101 cases were treated as compared with 168 in 1935.

The farms continued to be productive and the hospital is self-supporting as regards fruit, vegetables and pork.

DECREPIT SETTLEMENTS.

Decrepit settlements are maintained in Taiping, Kampar, Kuala Lumpur, Serendah, Kajang and Tampin.

The total average daily number of inmates during the year was 654, of which number 260 were accommodated in the decrepit settlements in Selangor.

Inmates of these settlements who become ill, are transferred to the hospital wards and are recorded along with the hospital patients.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment (Cap. 137). Towns and villages which consist of a score or so of houses, but which are not Sanitary Board areas proper, are generally brought under modified control by applying some of the provisions and by-laws under Part X of the Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank-floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

HOUSING OUTSIDE SANITARY BOARD AREAS.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part estate or mine managers and fairly well-to-do Asiatics, but their houses are as a rule of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz. : housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

Building Societies.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Production.

MINERALS.

The average domestic quota under the International Tin Control Scheme for the year 1936 was 67 per cent. compared with 42.25 per cent. for 1935. The following table gives a comparison of the domestic quotas for each period of the years 1935 and 1936:

	1935.	1936.
January-March	28.3%	65%
April-June	32.4%	62%
July-September	46.7%	65%
October-December	62%	76%

Exports were calculated throughout the year on an assay value of 75.5 per cent. tin.

The following table gives a comparison between the international and domestic quotas during 1936:

	International. %	F.M.S. domestic. %
January-March	90	65
April-June	85	62
July-September	90	65
October-December	105	76

The assay values of Malayan ores, from the inception of the restriction scheme, have been as follows:

March to December, 1931	75.1%
1932	75.38%
1933	75.47%
1934	75.39%
1935	75.56%
1936	75.54%

At the end of 1935, Malaya carried forward an underproduction of 68 tons tin which was changed to an overproduction of 193½ tons tin at the end of the year under review (this figure may differ by one or two tons from the final International Tin Committee's figures).

The Federated Malay States domestic quota represents an amount of tin which is available out of Malaya's standard tonnage of 71,940 tons, after making due allowance for exports of tin-ore from the Unfederated Malay States and Malacca, tin-ore from "dulang" washers, Sakai workings and confiscated ore. The amount then available for the domestic quota is expressed as a percentage of the total annual assessments of all mines producing tin-ore in the Federated Malay States. At the end of the year under review this total stood at 95,199 tons metal calculated at 75.5 per cent. tin-in-ore. The Unfederated Malay States have an annual assessment of 2,413 tons tin, subject to the International Tin Committee quota release; and flat rates, totalling 385 tons tin, have been given to Malacca, Perlis and Kelantan. All flat rates are to be abolished after the expiration of the agreement on 31st December, 1936.

TIN-ORE.

The methods of mining for this mineral ore in the Federated Malay States, in order of their importance from an output view-point, are as follows:

Dredging, gravel pumping, hydraulicing, lode mining and open-cast mining. A small amount was won by alluvial shafting or "lombong Siam" and 1,028 tons tin (22,866 pikuls tin-ore) were won by "dulang" washers.

The exports of tin and tin-in-ore from the Federated Malay States for the last five years, together with the domestic quota releases, were as follows:

	Tons.	Average F.M.S. quota releases.
1932	28,363 ...	32%
1933	23,926 ...	24.50%
1934	36,385 ...	34%
1935	40,749 ...	42.35%
1936	64,719 ...	67%

The following table gives the prices ruling during the last five years in dollars per pikul tin and sterling per ton tin:

—	1932.					1933.					1934.				
	£	s.	d.	$	c.	£	s.	d.	$	c.	£	s.	d.	$	c.
Highest... ...	159	7	6	81	75	228	17	6	124	00	242	7	6	121	00
Average ...	137	14	10	69	76	194	15	2	99	99	229	6	0	114	41
Lowest	104	12	6	52	87½	142	0	0	71	75	222	10	0	110	62½
Fluctuation ...	54	15	0	28	87½	86	17	6	52	25	19	17	6	10	37½

—	1935.					1936.				
	£	s.	d.	$	c.	£	s.	d.	$	c.
Highest	229	5	0	116	25	241	10	0	121	25
Average	217	16	3	111	32	200	5	9	100	39
Lowest	204	10	0	105	50	172	5	0	85	62½
Fluctuation	24	15	0	10	75	69	5	0	35	52½

GOLD.

The production of gold was larger than usual, and most of the increase was accounted for by the exploitation of alluvial deposits, in Perak, Pahang, and Selangor. More than 500 ounces were obtained as a side line to tin dredging in Selangor.

The Raub Australian Gold Mine is the premier producer, its 1936 production being 71.09 per cent. of the Federated Malay States total production of 37,779 ozs.

The deposits occur in quartz veins which have impregnated the faulted shales of the Raub series; they have been exploited to a depth of 1,050 feet. There has been considerable activity in the mining of alluvial gold when it is associated with tin-ore.

The following table shows the output of gold for the last five years:

	Lode. ozs.	Alluvial. ozs.	Total. ozs.
1932	27,755	1,541	29,296
1933	26,358	2,678	29,036
1934	24,310	5,911	30,221
1935	22,909	6,862	29,771
1936	29,449	8,330	37,779

COAL.

The only working coal mine in the Federated Malay States is situated at Batu Arang, Selangor, 25 miles north of Kuala Lumpur. The coal has a pitch-black colour and breaks with a conchoidal fracture. It is fairly hard and has a specific gravity of 1.2 to 1.3. It burns with a long flame. An unfortunate characteristic, however, is its tendency to spontaneous combustion, making it unreliable as bunker coal. It is non-coking. The output for 1936 was 502,823 tons.

Mining started in 1913 and up to date 7,376,000 tons have been removed. Of the very large tonnage of reserves, some 10,000,000 are developed and readily available for extraction.

TUNGSTEN ORES.

Scheelite, calcium tungstate, is mined on a large scale at Kramat Pulai, near Ipoh. This mine is considered one of the most important scheelite mines in the world to-day, but, unfortunately, recent investigation has shown that only a few more years of reserves are known to exist.

The outputs of scheelite for the last five years, 99 per cent. of which is produced by Kramat Pulai Limited, were as follows:

1932	302	tons
1933	918	,,
1934	1,508	,,
1935	1,365	,,
1936	1,364	,,

Wolfram, an iron and manganese tungstate, is mined on a small scale in Perak, Selangor and Negri Sembilan. The outputs for the last five years were:

1932	Nil	
1933	33	tons
1934	28½	,,
1935	8	,,
1936	3	,,

Tungsten is a most valuable metal for case-hardening steel. Tungsten steel is very tough and possesses the valuable physical property of retaining its temper at a great heat. It is used in the manufacture of high-speed tool-steel, filaments for electric glow lamps, as a substitute for platinum in making contact points, as a mordant in the dyeing industry, and, in the form of sodium tungstate, it is used in impregnating wood to render it fireproof.

GALENA.

Galena, a sulphide of lead and generally argentiferous, has been mined on a very small scale in Pahang.

The deposit occurs in a schist-limestone contact zone. Development work ceased in January. Steps, however, are being taken to instal machinery and restart the mine.

In the year 1935, 33 tons were exported to England and during 1936, 3½ tons.

FLUORSPAR OR FLUORITE.

Fluorspar or fluorite, a compound of calcium and fluorine, occurs associated with scheelite at Kramat Pulai Ltd.'s mine, where, it is estimated, there is a stock of 50,000 tons. There is little or no market for this mineral, the price offered being so low that it does not pay to separate it. Twenty tons of fluorspar were sent to England for the purpose of discovering whether or not there would be a market for this type of ore. On analysis it was found to be too low in fluorine content and therefore difficult to secure a market. The Kramat Pulai Co. do not intend exporting further supplies.

ILMENITE.

10,314 tons of ilmenite were exported, a big increase on last year's figures, but the amount is small compared with the production from beach sand in Travancore State, India, whence 127,051 tons were obtained in 1935. Ilmenite is the chief constituent of amang, a waste-product of tin mining in Malaya that is left as dumps in the tin fields in amounts to be read in hundreds of thousands of tons, but the comparatively high cost of transport prevents Malaya from being a serious rival to India in this new industry. So little was this understood by a certain newspaper (not published in Malaya), that it printed an article making erroneous statements about Malayan mines working day and night to cope with the increased demand for ilmenite, and about the sudden wealth that ilmenite has brought to native miners, statements that are without any basis in fact.

CHINA CLAY OR KAOLIN.

China clay, or kaolin, is worked on a small scale near Tapah in Perak. The following are the outputs for the last three years:

1934.		1935.		1936.
164 tons	...	91 tons	...	121 tons

Kaolin is used as a filler in paper and fabric manufacture, as a filler in rubber goods, and in the manufacture of pottery and porcelain.

AGRICULTURE.

Agriculture and tin mining continue to be the two most important industries in the Federated Malay States. Crops are grown on properties ranging in size from small-holdings of between one-half and ten acres to large estates varying in extent from 100 to several thousand acres.

The following review of agriculture in the Federated Malay States in 1936 is divided into three parts: A—crops grown on large estates and small-holdings: these include the major permanent crops, rubber and coconuts, together with coffee, bananas, pineapples and tea. B—crop grown solely by large estates, i.e., the oil palm, and C—crops grown exclusively by Asiatics, which comprise the important rice crop, tobacco, arecanuts, fruit and vegetables. In some instances only Malayan statistics are available, while in others the agriculture of the Federated Malay States is so interlocked with industries in other parts of the country that it is impossible to avoid reference to facts relating to areas outside the Federated Malay States.

A.—CROPS GROWN ON LARGE ESTATES AND ON SMALL-HOLDINGS.

Rubber.—The total area under rubber in the Federated Malay States at the end of 1936 was estimated to be 1,576,410 acres made up as follows:

—	1 Estates of over 100 acres.	2 Holdings of less than 100 acres.	3 Total.	4 Increase or decrease compared with 1935.
	ACRES.	ACRES.	ACRES.	ACRES.
Perak	307,901	244,304	552,205	− 1,944
Selangor ...	353,569	133,295	486,864	− 857
Negri Sembilan	285,943	86,274	372,217	+ 442
Pahang... ...	89,237	75,887	165,124	− 991
	1,036,650	539,760	1,576,410	− 3,350

The immature area on estates amounted to 81,156 acres, that on small-holdings is not known.

The area of budded rubber in the Federated Malay States amounted to 111,369 acres as compared with 106,313 acres in 1935; it was divided among 402 estates. Of this area, 63,614 acres had reached tappable age.

PRODUCTION AND CONSUMPTION.

The production of rubber during the past four years is shown below:

PRODUCTION OF RUBBER IN THE F.M.S., 1933-1936.
(IN TONS.)

State.	By estates of 100 acres and over.			
	1933.	1934.	1935.	1936.
Perak	44,320	46,612	41,917	39,925
Selangor	51,239	55,754	47,235	45,633
Negri Sembilan	36,918	37,973	35,885	31,337
Pahang	4,886	7,078	8,030	8,110
Total ...	137,363	147,417	133,067	125,005

State.	By small-holdings of less than 100 acres.			
	1933.	1934.	1935.	1936.
Perak ... ... Selangor ... ... Negri Sembilan ... ... Pahang	110,848	104,141	67,380	62,596
Total ...	110,848	104,141	67,380	62,596

State.	Total.			
	1933.	1934.	1935.	1936.
Perak ... ... Selangor ... ... Negri Sembilan ... ... Pahang	248,211	251,558	200,447	187,601
Total ...	248,211	251,558	200,447	187,601

Local consumption of rubber in Malaya amounted to only 435 tons, so that practically the whole production was exported. The majority of the crop continued to be produced in the form of standard smoked sheet, but appreciable quantities of rubber were again exported in the form of latex; the total quantity exported from Malaya in this form during the year was estimated to amount to 16,937 tons (on the basis of dry rubber content) as compared with 13,150 tons in 1935.

Rubber Regulation.—The International Rubber Regulation Agreement continued in force throughout the year. Under the agreement, Malaya received a quota of 569,000 tons for 1936 as compared with 538,000 tons for 1935. The share of Malaya's quota allotted to the Federated Malay States by the Controller of Rubber in 1936 was 291,800 as compared with 283,560 in the previous year.

CONDITIONS ON ESTATES AND SMALL-HOLDINGS.

In spite of the relatively low percentage of the quota allowed for export, the price of the product has enabled almost all estates to produce rubber at a profit. Many estates have carried out improvements on their properties which had perforce been postponed during the difficult period prior to the introduction of the present rubber regulation scheme.

Under the International Rubber Regulation Agreement planting of new areas is prohibited; in consequence no new areas were planted with rubber during 1936. On estates considerable areas were replanted during the year, methods of clearing ranging from simple felling to clean clearing with complete root extraction. There was also a marked increase in the amount of attention shown to manuring, particularly in replanted areas, and to the use of cover crops.

The area out of tapping on estates amounted to about 229,593 acres at the end of the year. Surveys of the area of small-holdings out of tapping were made and indicated that about 40 per cent. of the total area was untapped during the first three quarters of the year and about 37 per cent. at the end of December. One of the indirect results of restriction is the growth of trade in export coupons and export rights without rubber and in rubber not covered by coupons or export rights. At certain times of the year coupons have been in strong demand in certain localities by dealers who have had rubber on hand not covered by export vouchers. Prices for coupons ranged from about $23 a picul equivalent in January to as high as $31 per picul equivalent in December. Prices of uncouponed rubber ranged between $3.5 and $6 a picul in January to from $13 to $18 a picul at the close of the year.

During the slump the owners of holdings usually tapped their own trees and were obliged to tap drastically in order to get a living. With the improved price of rubber, labourers are hired to tap often on contract, without regular supervision, and they do not act on any advice given to them. The result is that on a large proportion of the small-holdings which are in tapping the bark consumption is still two or three times that allowed on well-managed estates. The situation generally is, however, relieved by the fact that small-holders often sell their "coupons" and do not tap systematically.

Budgrafting has been done on a few holdings, replanting is under consideration on several, and some of the more progressive small-holders are considering manuring. There is also more willingness to spend money on the control of disease. Formerly the only disease to be treated regularly was mouldy rot, the treatment of which is compulsory. Now the control of root and branch diseases is receiving attention, and will help greatly in prolonging the life of small-holding rubber.

Pests and Diseases.—The usual seasonal work in the field gave further support to the conclusion that weather and environment are of paramount importance when considering the occurrence and virulence of the leaf mildew fungus *Oidium Heveae.*

In general it can be said that the foliage and seed set in the old rubber was even better than last year and that the incidence of *Oidium Heveae* in the new leaf was practically nil up to the 10th March, and thereafter was mild and occurred only in the later wintering trees. Various preparations of sulphur dust for use against oidium were tested.

During the dry weather experienced from February onwards and even at the end of the year, when heavy rains are normally the rule, the leaf spot fungi *Helminthosporium Heveae, Gloeosporium Heveae, Colletotrichum sp.* and *Scolecotrichum* continued to give considerable trouble in nurseries and in young rubber in the field.

The thrips pest of leaves of rubber trees was again prevalent on many estates in the west coastal districts of Malaya this year but in very few cases was sulphur dusting to check this pest really needed.

The All-Malayan Small-Holders' Rubber Competition was held in August, whereat selected prize-winning exhibits from District Shows were finally judged at the Central Competition at the Malayan Exhibition in Kuala Lumpur.

The Asiatic staff of the Small-Holders' Advisory Service which is maintained by the Rubber Research Institute of Malaya now numbers ten officers in the Federated Malay States distributed as follows: Perak 4, Selangor 3, Negri Sembilan 1, Pahang 2. Of these, six are Malays, two Chinese and two Indians. The result of their work has already become clearly evident, for reports of improvement in the preparation of rubber, in tapping methods, disease control and general upkeep of the crop have been received from all the Agricultural Officers. The cheap form of smoke cabinet advocated for small-holders has proved capable in actual use of producing smoked sheet up to estate standard.

There are, however, difficulties in regard to the marketing of this product, as in some localities the margin in price ruling locally between unsmoked and smoked sheet is so narrow that the small-holder preferred to sell unsmoked sheet to his local dealer rather than to spend time on smoking his product. This naturally applies specially to places where the small-holder can find profitable employment when not engaged on work connected with his own holding.

In other localities an apparently satisfactory arrangement has grown up whereby the local dealer provides facilities for his small-holder clients to smoke their rubber at a fixed charge. Such charges vary from 50 cents to $1.20 a picul, according to the machines and apparatus made use of by the small-holder. The machines include mangles for rolling the rubber, a somewhat expensive item for the owner of a very small holding to purchase for himself. An advantage of this system is the production of a fairly uniform product, as the result of comparative uniformity in the matter of straining and coagulating the latex as well as in rolling and smoking the sheet. Where this arrangement is established on a fully satisfactory footing there would seem to be no reason for changing over to individual smoking on the smoke cabinets.

The difference in the local price between unsmoked and smoked sheet varies from about 80 cents to $3 a picul. In general, it appears probable that a difference of $1 a picul is sufficient to make it just worth while for a small-holder to use a smoke cabinet in those areas where he has little opportunity to obtain outside employment and can get his firewood free of cost.

In areas where the price difference is $2 or more a picul, smoke cabinets are becoming popular and, once erected, are kept in constant use. The possibility of improved marketing in areas where the present premium is low is receiving attention, and there are reasons for believing that better prices for smoked sheet may gradually be established as more small local dealers tend to adopt the practice of grading their product which they have not done hitherto.

An examination of the position regarding coagulants used by small-holders has led to the general conclusion that, from the small-holders' view point, sulphuric acid is more economical than formic acid, as it is about one-third of the price of the latter, and the small-holder obtains the same price for his rubber whether coagulated with sulphuric or formic acid. It would seem that legislative action to prevent the use of sulphuric acid as a rubber coagulant would only be justified if it can be shown that its use renders the product definitely inferior. Actually the final product is not inferior provided that the sulphuric acid be not used (as it often is) in great excess. It is thus possible that the official policy in the past has partly defeated its own ends. For so long as the use of sulphuric acid was entirely frowned upon, it was felt to be inconsistent to give instructions about its correct use. The new policy is that while formic acid is still to be advocated as the best coagulant, instructions are also given about the dilutions and quantities of sulphuric acid that should be used by those who prefer to continue to employ that cheaper coagulant.

A scheme was initiated in Pahang at the beginning of the year, having as its object improvement in the preparation of small-holders' rubber. The essential feature of the scheme is that dealers are required to exhibit samples of the various grades of commercial rubber with a statement of prices for each grade. It is claimed that this scheme, coupled with the propaganda of Asiatic Rubber Instructors and departmental officers, has resulted in marked improvement in the product sold by small-holders, especially in the riverine areas, where the product formerly made was of a very low grade.

Coconuts and Coconut Products.—Coconuts are grown both as an estate crop and also on numerous small-holdings throughout the Federated Malay States. Coconut estates are confined to the Bagan Datoh district of Lower Perak and the coastal area of the district of Krian in the State of Perak and to the coastal areas of the districts of Kuala Selangor and Kuala Langat in the State of Selangor. The estimated acreages under cultivation in the crop are shown below:

	Areas grown on estates of over 100 acres.	Areas grown on small-holdings less than 100 acres.	Total.
Perak	52,345	63,841	116,186
Selangor	37,590	72,681	110,271
Negri Sembilan	1,069	4,930	5,999
Pahang	2,842	14,729	17,571
Total	93,846	156,181	250,027

The cultivation of this crop for copra production is only extensively practised in the coastal area of Selangor, where there are about 70,000 acres of coconut small-holdings, and in the Bagan Datoh area of Perak (approximately 32,000 acres). On the East Coast of Pahang copra making is practised on a small scale. There is a considerable trade in fresh nuts from small-holdings on coastal areas to inland districts where local supplies are deficient.

The total annual consumption of coconuts in Malaya is estimated to be 100 nuts per head of the whole population per annum, while it can be safely assumed that in the coconut-growing areas consumption of coconuts amounts to one nut per head of population per day.

Very little use is made of the by-products of the coconut industry in Malaya; the production of coconut coir as a small-holders' industry is practically non-existent, neither is coconut charcoal made to any extent.

Prices for coconut products showed some increase during January, which, however, was not maintained. Prices again improved gradually from the beginning of June and rose sharply in November and December. The price of "Sundried" copra in Singapore ranged from $4.50 to $9.50 per picul. The comparative average prices of coconut products in Singapore per picul were as follows:

	Sundried copra.	Mixed.	Coconut oil.	Cake.
	$	$	$	$
1933	3.90	3.41	7.70	1.65
1934	2.94	2.44	5.96	1.28
1935	4.54	4.15	9.13	1.55
1936	5.81	5.38	11.96	1.67

An increasing proportion of the copra production is converted into oil and cake within the Peninsula for local consumption and for export. The nett quantity of oil exported from Malaya shows a further increase from 35,911 tons in 1935 to 46,507 tons in 1936. Of the latter, only 92 tons were exported from the Federated Malay States.

CONDITIONS ON ESTATES AND SMALL-HOLDINGS.

The improved price of copra allowed more attention to be given to cultivation both on estates and on small-holdings.

Research work designed with the object of improving the quality of Malayan copra has been contineed by the Department of Agriculture together with active propaganda for the dissemination of information among small-holders particularly with regard to the erection and use of improved kilns. Results have been seen in a marked improvement in the quality of Malayan copra both on estates and, particularly, on small-holdings in Perak, Selangor and Pahang.

The tendency of recent years for the small-holder to prepare his own copra instead of selling nuts to dealers has been fully maintained. It has become increasingly evident, however, that the problem of marketing requires further investigation.

The seasonal reduction in crop which normally occurs in August and September was unusually marked and prolonged in all areas and production had not returned to normal by the end of the year.

Pineapples.—The area under pineapples in the Federated Malay States at the end of 1936 was 11,034 acres as compared with 9,525 acres in 1935. Of the total planted area, 8,445 acres were in Selangor, the only State in which the fruit is grown for export; there is an increase of 1,000 acres under this crop in Selangor. To some extent this is a replacement of catch-crop pineapples which will be cut out to allow of the development of the main crop. In the other three States the fresh fruits are sold for local consumption.

Formerly pineapples were cultivated exclusively as a catch-crop between young rubber and were employed as a means of cheapening the cost of bringing rubber into bearing. The industry, however, made such strides and the export trade in canned pineapples assumed such large dimensions, that, with the cessation of rubber planting, the conversion of pineapple growing to a main crop basis became a matter of importance. The transition is of a fundamental character and necessitates complete alteration in the methods of cultivation if the lands on which the crop is grown are to be maintained in a satisfactory state of fertility.

In the three canning factories operating in Selangor great improvements in manufacturing methods have taken place. This has been due both to the legislation enacted in 1934 to enforce standard sanitary measures and to the work of the Canning Officer who was appointed to the Department of Agriculture in January, 1936.

The average Singapore prices per case of 48 tins of 1½ lbs. each of Malayan pineapples were as follows:

Year.	Cubes.	Sliced flat.	Sliced tall.	Fresh fruit per 100.	
				First quality.	Second quality.
	$	$	$	$	$
1934	3.10	3.01	3.19	2.52	1.38
1935	3.47	3.27	3.51	3.25	2.52
1936	3.29	3.09	3.29	3.29	2.78

The Pineapple Experiment Station at Lim Chu Kang, Singapore, which is supported by the three Governments of the Straits Settlements, Johore and the Federated Malay States continued operations during the year and further experiments on cultivation and manuring have been carried out. Briefly, the indications are that if pineapples are to be grown profitably as a sole crop, manuring must be on a fairly generous scale and planting distances must be closer than those normally adopted in Malaya. The original selections of 184 plants made last year were brought up to 140 and characteristics of the fruits reaped were recorded.

Coffee.—Coffee is grown both on estates and small-holdings either as a sole crop or else interplanted with other cultivations. In the Federated Malay States there are 12,169 acres under the crop, the most important centre of production being Selangor with 7,744 acres; the crop is grown by numerous Malay and Chinese small-holders particularly in the coastal district of Kuala Langat.

Practically none of the coffee produced in Malaya is exported. In 1936 the imports into the Federated Malay States amounted to 793,829 lbs. valued at $84,237.

The Singapore prices for coffee declined by about $1.50 per picul below those of the previous year. The average prices for the different grades were as follows: Palembang $8.90 per picul and Sourabaya $14.15 per picul. The prices of locally produced coffee vary considerably on the local market according to the variety. Robusta now fetches about $11 per picul wholesale, and the Liberian type about $17 per picul. The prices for Robusta and Liberian coffee were too low to render the cultivation of this crop profitable under estate conditions.

In the lowland districts the varieties of coffee cultivated are either of the Liberian or the Robusta type. In the Cameron Highlands area trials have been in progress for some years with the cultivation of Arabian coffee and there are about 317 acres planted under the crop in this area.

In addition to the coffee leaf disease, *Hamelia vestratrix*, which was prevalent on Arabian coffee in Cameron Highlands, the red root disease *Ganoderma pseudoferreum* was recorded on coffee bushes on a small estate in Selangor.

Tea.—The area under tea in the Federated Malay States at the end of 1936 was 2,352 acres compared with 2,279 acres in 1935. Of this total 1,440 acres were planted on upland estates mostly in Cameron Highlands and 912 acres on lowland estates on the plains in Selangor and Perak and on small-holdings owned by Chinese in Selangor and Negri Sembilan. Existing tea estates have 7,766 acres of reserve land. Including the two experiment stations of the Department of Agriculture, there were ten estates making black tea of which four were upland estates and six lowland. All these estates supplied the local market and in addition seven estates exported tea for sale in London. The retail price for this tea locally varied from 60-75 cents per lb. according to grade, although green tea of inferior quality made on small-holdings was retailed at about half these figures.

The total production of tea is not known. Experiments at the Central Experiment Station, Serdang, with an adequate application of fertilisers resulted in an average yield of 1,200 lbs. of made tea per annum from ten-year-old bushes. Average yields of 892 lbs. of made tea per acre per annum were obtained during the year from bushes 8 years old at the Experiment Station at Tanah Rata, Cameron Highlands. This represents an increase of over 150 lbs. of made tea per acre as compared with the yields of last year.

Six commercial consignments from the Tanah Rata Experiment Station amounting to a total of 30,002 lbs. of made tea were shipped to London during the year. The average price obtained on the London market was 12.70*d*.

Four shipments of lowland tea were made to the London market from the Central Experiment Station, Serdang, amounting to a total of 15,510 lbs., the remainder of the produce being sold locally. The average price realised for the shipments to London was 11.74*d*. per lb., a figure little inferior to the price obtained for Cameron Highlands tea.

Experiments on cultivation, manuring and manufacture of tea were continued at both the Government Experimental Stations.

Protracted negotiations between the Government and the International Tea Committee culminated in an agreement to limit the planting of new areas in Malaya during the period of the agreement (to 31st March, 1938) to 3,000 acres, and to prohibit the export of tea seed. Legislation to give effect to this agreement was enacted and came into force early in 1937.

Derris.—The increasing interest in the cultivation of derris (tuba root) for export has been maintained throughout the year. The crop is grown for use as an insecticide and finds considerable employment in the form of spray washes for the control of plant pests and as a constituent for cattle and sheep dips. The plant from which derris is prepared is a native of the Peninsula and its toxic properties have long been known to the Malay population among whom its use as a fish poison is traditional; its development as an article of commerce for the preparation of insecticide is, however, a matter of comparatively recent growth.

The area planted under this crop in the Federated Malay States at the end of 1936 was 3,573 acres, an increase of 1,852 acres as compared with 1935.

The dried root is sold on two different bases of its toxic content, namely, rotenone content to the American market and ether extract value for other markets. It has been shown that the toxic content of the root varies considerably according to the strain that is planted and a variety has been found to occur in the Changi District of Singapore, of which the toxic content is exceptionally high and for cuttings of which there has been a very large demand.

The average Singapore prices for derris were as follows:

Year.	Sold on rotenone basis.	Sold on ether extract basis.
	$	$
1934	37.42	28.75
1935	49.58	36.88
1936	48.58	31.54

Extensive experimental work was carried out by the Department of Agriculture during the year on the investigation of the toxic content of various strains of derris and on the establishment of clones of high toxic value. Work was also performed on the separation of the various toxic constituents.

B.—CROP GROWN ENTIRELY ON LARGE ESTATES.

Oil Palms.—The total area planted under oil palms and reserve land at the end of 1936 in the Federated Malay States was as follows:

	Acres.	Reserve land unplanted.
Perak	17.405	8,051
Selangor	13,790	3,204
Negri Sembilan	1,903	1,940
Pahang	1,008	534
Total	34,106	13,729

This represents an increase of 1,031 acres in the area planted as compared with 1935.

All of the produce was exported with the exception of small quantities of oil which were used for the manufacture of soap. Production of oil palm and kernels in the Federated Malay States during the past five years is shown in the following table:

Year.	Palm oil. Tons.	Kernels. Tons.
1932	7,076	1,212
1933	9,333	1,600
1934	12,965	2,013
1935	17,339	2,711
1936	23,081	3,791

It is to be anticipated that the output of the industry will show considerable annual increases for some years to come as the more newly planted areas come into full bearing.

During the year prices of palm oil and palm kernels fluctuated very considerably. The average prices for the year were as follows: Palm oil £19.18*s*.2*d*. per ton and palm kernels £11.0*s*.11*d*. per ton. There are now 21 oil palm factories operating in the Federated Malay States (including the factory on the Central Experiment Station, Serdang).

Experimental work on manuring of the crop and on the breeding of improved varieties by hybridisation and selection was continued throughout the year.

The total area felled and cleared up till the end of 1936 was approximately 14,000 acres, of which about 12,000 were planted.

During the year, the total length of batas constructed by the cultivators increased from 30 miles to about 100 miles. This has greatly assisted in the successful operation of the system, and on the whole the cultivators are well satisfied with the control of the water.

In 1935 a dam in the Sungei Beranang, a syphon and drops were constructed and in 1936 the *tali ayers* were completed. Unfortunately, owing to flood damage these were not completed in time for the 1936 season and no padi was planted.

To lessen the effects of flooding, the river was cleared and the brushwood dams removed and by the end of 1936, the river had lowered its bed nearly three feet. The *tali ayers* have been repaired and water is being supplied to the sawahs for the 1937 season.

In 1936 a dam was constructed on the Sungei Jendaram below the road bridge to irrigate the lower area of 273 acres and was completed in December at a cost of $4,537. Of the lower area, 138 acres were planted in 1936.

At Ulu Langat, the padi area is situated on the left bank of the Langat River from the 15½ to the 17½ mile road and extends to some 325 acres. It has been irrigated by a *tali ayer* from a boulder dam at the 17¼ mile and the improvements carried out in 1936 consisted of the construction of an intake at the bed level of the river, a control gate and the extension and reconstruction of the *tali ayer*. At the end of the year the intake and the control gate had been completed. The pipes for the *tali ayer* have been laid leaving a further section of *tali ayer* to be constructed in 1937. Dollars three thousand and thirty have been spent out of a total estimate of $5,000.

Sungei Muar Valley.—Between Kuala Pilah and Kuala Jempol there are some 50 brushwood dams of varying size all contributing to the deterioration of the river and causing flooding in the valley during periods of stormy weather.

A permanent dam commenced in 1935 has been constructed at a point about 1½ miles downstream of Kuala Pilah town. It is fitted with radial gates designed at headquarters and of local manufacture and is the first of its type in Negri Sembilan.

The eight gates, ten feet span by six feet deep, are operated by overhead gearing from a footbridge and can be raised clear of all floods, thus affording the maximum waterway.

When the scheme is in full operation and all the brushwood dams have been removed, the river will clear its silt and provision has been made for a lower bed level in the design of the weir.

During the last padi season, parts of the valley were irrigated from the newly constructed dam and *tali ayer*.

Sri Menanti.—The Sri Menanti scheme extending to about 300 acres is situated a few miles from Kuala Pilah in one of the prettiest valleys in Negri Sembilan.

In 1935 the *tali ayers* were enlarged and regraded and syphons, flumes and notch falls provided to permit of effective distribution of the limited amount of water available. A considerable extent of earthwork carried out by the raiats working in co-operation completed the scheme which is now giving very great satisfaction.

The area is perhaps the most settled of all the small areas in Negri Sembilan; a supervisor looks after the scheme, his duties being to see that the area is efficiently supplied with water and that maintenance is reasonably carried out. He is required to report any damage by flood or other cause to permanent works in the area. This system operates with some degree of success and it is hoped to extend it to other areas.

In the recently completed scheme at Labu where 560 acres are irrigated by a main canal 5½ miles long with five branch lines, very satisfactory results were attained. A number of minor improvements found to be necessary were carried out. No less than 14 brushwood dams have been removed from the river channel and this improvement to the drainage must reflect very greatly on the harvest.

The scheme carried out in the Kampong Daching area, commenced in 1935 and completed in 1936, did not come fully into commission. It was expected that if Government constructed the dam, the necessary controls and the more difficult portions of earthwork for the *tali ayer*, the raiats would carry out the simpler work. Unfortunately this did not prove to be so and by the end of 1936, out of a total length of 20,000 feet of *tali ayer* required, only 3,500 feet had been completed.

Ampang Jeram.—During 1935, a thorough investigation disclosed the possibility of extending very considerably the area commanded by the dam and in 1936 the necessary work was put in hand.

As a major part of the extension area lies on the right bank of the Muar River, it was necessary to carry the water supply across the river. A syphon, 18 inches diameter and 327 feet long, with inlet and outlet works above maximum flood level, was constructed at a point about 10,000 feet downstream from the dam. In addition to the syphon, ten notch falls were constructed along the line of the *tali ayer* to reduce the gradient and so prevent damage being done by erosion.

Two emergency spillways have been provided to discharge surplus water which during storms will find its way into the *tali ayer* from the hillside. When fully completed, this scheme will embrace 630 acres; four brushwood dams will be removed from the river with a consequent improvement in the drainage.

A concrete dam, 20 feet wide, fitted with a radial gate has been constructed together with the necessary offtake gate to control supply to the *tali ayer* at Kombok to irrigate 100 acres.

Paya Besar Padi Area.—Construction was started in 1935 on an additional scheme for irrigation of the area from the Sungei Pandan to supplement the uncertain water supply derived from rainfall. To date, a total sum of $45,000 has been expended on the development of this scheme.

The work executed in 1936 consisted of jungle clearing for, and the completion of, the excavation of the irrigation canal from the Sungei Pandan, construction of the intake, head gate, two control gates and a considerable length of bund and drain.

Construction work was carried out in difficult and unpleasant conditions owing to the continued rainfall throughout the greater part of the year when all the low-lying jungle land was under water.

Colonisation of the area has, unfortunately, not kept pace with the construction and the figures are very disappointing. By the end of 1934, only 380 acres had been planted out of the 1,170 acres at present served by the irrigation scheme. At the end of 1935, the planted area had increased to 457 acres and this figure was not increased during 1936.

During the year, $3,937 has been spent on the layout and construction of raised paths in the new kampong area and in the improvement of access paths from the main road.

The Paya Bungor area adjoins the Kuantan-Benta road at mile 36. The paya is roughly Y-shaped, following the courses of the Sungei Bungor Kanan and Sungei Bungor Kiri which join together to form the Sungei Bungor. The irrigation scheme consists of two dams—one on each branch of the river—with spillway gates and *tali ayer* leading from each.

Work started in 1934 but, owing to various unfortunate circumstances, was not finished until 1936. The total cost was $4,556 for a plantable area of 200 acres—a cost of $22.78 per acre. The scheme is now operating very successfully and the harvest in 1936 was the highest ever obtained.

The Gali Tengah scheme was started in 1935 and completed in 1936 and replaces an inefficient irrigation system on the Anak Sungei Gali constructed by the raiats.

The scheme which has cost $7,152 has increased the plantable area from 195 acres to 370 acres giving a unit cost of $19.33 per acre. The area is situated in the fertile Gali valley to the east of the Kuala Lipis-Raub road about three miles from Raub.

The works consist of a permanent concrete dam and head gate and a *tali ayer* containing three "falls". Water was turned on in July, 1936, and the scheme has been working very successfully. Much new ground has been cleared for planting next season. The whole area was gazetted in 1936 as an Irrigation Area with the Drainage and Irrigation Engineer as officer in charge.

The present scheme at Durian Sebatang consists of a concrete weir on the falls known as Jeram Tedong in the Sungei Dong, a new intake and the reconstruction and extension of the *tali ayer*. The work was started in 1935 and completed in 1936. Water was turned on in June, 1936, and the operation of the scheme has been entirely successful.

The area served is 182 acres and much ground which has been lying waste for years is, this year, under padi. The cost of the scheme was $7,500 which represents a charge of $41.21 per acre. The area was gazetted in 1936 as an Irrigation Area with the Drainage and Irrigation Engineer as officer in charge.

BAGAN DATOH DELTA DRAINAGE AREA.

(*a*) *Data—*

Area of land alienated	46,181	acres
Area of reserves and State Lands	2,221	,,
Total area ...	48,402	,,
Total length of internal drains and paths maintained	152	miles
Total length of outlet drains maintained	9	,,
Total length of coast bund maintained	28	,,
Total number of water gates maintained	24	,,

(*b*) *Cost of maintenance.*—The system was maintained during the year 1936 in good working order at a total cost of $39,915, which represents 86.5 cents per acre of alienated land and 82.5 cents per acre on all land within the gazetted drainage area. Dollars forty-seven thousand four hundred and ninety was collected in Drainage Rate. The recent improvements to coast bunds round the area will, it is expected, result in a reduction of bund maintenance costs from 1938 onwards.

Owing to coastal erosion, it was decided in 1935 to retire the coast bund between Sungei Balai and Rungkup and in June construction of the new bund was started. A Malay labour force, recruited locally, cleared the one and a quarter chain wide bund reserve, stumping 24 feet of that width for the bund site. About 60 Malays were employed on this work at 50 cents per day but at the end of the year with copra prices rising this labour was difficult to get and the wages had to be increased to 60 cents per day.

Material for the bund was excavated from the mangrove swamp by a Dragline excavator working a 24-hour day by crews (half Chinese and half Malay) on four 6-hour shifts. The machine worked very well and by the end of the year had completed excavation for 20,812 feet of bund; only 4,579 feet remaining undone on 31st December, 1936.

Jendarata Canal.—A floating harrow has been constructed at a cost of $500 which has been set to work on Bernam River half of the canal. It floats up and down the canal with the tides, its iron teeth stirring up the silt deposits which the tide sweeps out to sea. During the year, the bed of the canal has been lowered from 6 to 12 inches by this machine, the operating costs amounting to $497.

Draining and Bunding: Selangor Coastal Areas.—The construction of the Sabak Bernam bund was commenced in 1933 and the expenditure to the end of 1936 was $150,733 out of a total estimated cost of $180,000. The scheme gives protection from inundation by the sea and improved drainage to an area of approximately 30,000 acres.

Nearly the whole of the area is planted in coconut, owned by small holders.

The Malay Agricultural Assistant, Sabak Bernam, has put forward the following observations and figures as regards increased yields of coconuts:

(*a*) Area adjacent to coastal bund—

Before construction of bund these coconuts were barren, they now yield about 50-100 nuts per two-month period.

(*b*) Area 30 to 40 chains from the bund—

Before construction of bund these coconuts yielded about 250 nuts per two-month period, they now yield about 350 nuts.

In connection with the scheme for the protection of the coastal area between Sungei Sekindi and Sungei Tengi, the kampong land has suffered severely from inundation by the sea. A coastal bund with tidal control gates is under construction from the end of the Sabak Bernam Peninsula to Sungei Tengi—a distance of 28 miles.

The work is estimated to cost $350,000 and a start was made in October, 1935, when a Dragline Excavator was started at Sungei Besar and by the end of December, 1936, had constructed 4⅔ miles of bund.

In conjunction with the construction of the bund, three permanent water gates at Sungei Burong, Sungei Panchang Bedina and Sungei Besar were completed in 1936. A fourth gate at Sungei Haji Dorani was started but the contractor made poor progress and the contract was determined at the end of the year.

Dollars twenty-eight thousand four hundred and sixty-six were spent in 1936 bringing the total expenditure up to $62,121.

At Jeram, work was started in 1935 on the construction of a coastal bund connecting with the Klang-Kuala Selangor road from the 17th to the 21st mile together with a tidal control gate. The work was originally given out to local kampong Malays but owing to the slow rate of progress a contract was let and the work was completed in 1936 at a total cost of $11,954.

The construction of a bund and drain at Rantau Panjang was carried out by a Ruston-Bucyrus Dragline Excavator and by the end of the year the bund and drain had been completed except for three portions of the bund where it crosses three large outlets.

The tidal control gate for the drainage of the area was completed in 1935.

The total cost to date is $25,472 out of a provision of $32,800.

The area bunded and drained is 1,800 acres occupied by small-holders whose lands have suffered severely in the past from inundation by sea water which has also affected the health of the community.

At Teluk Pulai a Dragline Excavator started work in July, 1936 and by the end of December had constructed 18,480 feet of bund. The tidal control gate was completed in 1936 and the expenditure to date is $15,643 out of a provision of $27,000. The area bunded and drained is about 1,350 acres and the conditions are identical with Rantau Panjang.

Dredging Sungei Raia.—A sum of $54,000 was entered in the 1936 Estimates and work started on 1st March when the 1¼ cubic yard Dipper Dredger commenced to cut the channel, 113 chains long, from the new kuala on the Kinta River situated some 10 chains below the Batu Gajah-Gopeng Road Bridge.

The 12″ Cutter Suction Dredger which had completed an overhaul on 1st April was moved up in rear of the dipper and took over the digging of the channel from chainage 103 to the head of the new channel at the Kinta Kellas Estate Road Bridge.

This dredger deposited through its discharge pipe line, the dredged sand to fill the portions of the old river bed and improve the general drainage and value of the adjacent land.

At the end of the year the Dipper Dredger had moved back to the Kinta River and the whole discharge of the river then flowed down the new cut. Trimming of the banks and berms was completed over 75 per cent. of the channel.

The Dipper Dredger dug 109,100 cubic yards of spoil at an average cost of 12.9 cents per cubic yard and the 12" Suction Dredger 43,500 cubic yards at 15.6 cents per cubic yard average.

At the end of the year the Suction Dredger had moved through the Kinta Kellas Estate Road Bridge and was working in the reach immediately upstream where it will remain during 1937 to dredge the silt from the upper reaches.

Klang River.—The maximum recorded flood discharge in the Kuala Lumpur flood channel at Market Street Bridge was 11,350 cubic feet per second on 15th October, 1932. The highest discharge in 1936 was 5,068 cubic feet per second at a gauge height of 11.3 feet on 31st March, 1936.

The stone pitching of the low water channel banks through the entire length of the flood channel started in 1935 was completed this year. A sum of $4,900 was spent bringing the total cost up to $39,871.

The need for this stone pitching had been evident for some time as these banks where unprotected had been rapidly scoured.

The grass slopes and berms of the flood course have been kept close cut and any holes due to scour during floods filled up. Repairs to stone pitching and town drain outlets were carried out as required at a sum of $1,054.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment (Cap. 2) and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;

(*b*) Courts of a Magistrate of the First Class;

(*c*) Courts of a Magistrate of the Second Class;

(*d*) Courts of a Kathi and Courts of an Assistant Kathi;

(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record and generally, in original jurisdiction, has the same jurisdiction and authority as is exercised in England by the Chancery and King's Bench Divisions of the High Court of Justice. The establishment consists of a Chief Justice and three Judges, but the Chief Justice and Judges of the Supreme Court of the Colony and the Judge of the Supreme Court of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The Chief Justice and Judges are appointed by the High Commissioner, who may also appoint any fit and proper person to act temporarily as Chief Justice or as a Judge, and may terminate any such appointment.

Magistrates are appointed by the Resident by name or office. Appointments have always been made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally, every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment (Cap. 147) for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code (Cap. 154) in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

Police.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang, the Police Contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner who, subject to the general direction of the Commissioner of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his Contingent. A fifth Contingent exists in the Depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is, also in Kuala Lumpur, the headquarters staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch which co-ordinates Criminal and Political information in the Federated Malay States and the Criminal Registry or Fingerprint Bureau which serves not only the Federated Malay States, but also the Straits Settlements and the Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hong Kong, Netherlands Indies, Siam and Indo-China.

The Federated Malay States Police cadre provides for fifteen British officers for service on deputation in Unfederated Malay States and the Federated Malay States Railway Police.

The total approved strength of the Police Force was 3,969 on 31st December, 1936, comprised as follows:

95 British officers;

61 Malay and other Asiatic officers;

2,373 Malay rank and file;

1,216 Northern Indian subordinate Police officers and constables;

224 Detectives (of various nationalities).

In addition there is a Veterinary Police of 68 Malays and Indians which, for disciplinary purposes and reasons of economy, is housed in Police barracks and is paid from Police Votes, though under the direction of the Veterinary Department.

During the year 317 Malays were enrolled. Of the men recruited during this year fifty-five had an English education. The majority came from Negri Sembilan, Perak, Selangor and Malacca. There was no shortage of applicants. Fifty-three Northern Indians were enrolled. The physical standard of recruits of both nationalities was up to the average.

Offences of all kinds reported at police stations during the year totalled 95,363 compared with 96,796 in 1935. Of this total, 7,699 were reports of seizable offences, a figure which compares with 7,977 the previous year. At the close of the year 2,442 convictions had been recorded in respect of seizable offences.

Under the category of serious crime the offences of murder, gang-robbery and robbery were classified together. In 1936 offences under these headings totalled eighty-five. The number of murders increased from 48 to 49 and included the murder of an Australian trainer named Casson by disgruntled Boyanese syces. Gang-robberies decreased from 5 to 2 and robberies remained at 43, the same as for last year. There were 14 murders committed in the course of gang-robbery or robbery. There was no organised gang of robbers operating in the Federated Malay States during the year and for the first time in the history of the Police Force there was no report of gang-robbery in the State of Perak. There were five reports of counterfeiting coins, none of them serious.

The reports of house-breaking showed a slight decrease and totalled 1,166 compared with 1,197 the previous year whilst thefts decreased from 4,061 in 1935 to 3,930 in 1936. The total thefts included 899 reports of thefts of bicycles, a type of offence that caused the Police considerable trouble.

Non-seizable offences totalled 87,664 compared with 88,819 in 1935. The Police prosecuted in 63,933 of these cases. There was no public gaming on a large scale during the year.

Twenty-six firearms were recovered by the Police during the year 1936. Of these three were identified as having been lost or stolen.

The suppression of brothels and of trading in women is undertaken by the Police. In all there were 41 prosecutions instituted in pursuance of this duty; the traffic was well in check.

The issue and renewal of passports was performed by the Police. Six hundred and fifty-four new passports were issued during the year, 386 were renewed, 316 endorsements were made and 181 *visas* granted.

During the year inquiry by means of fingerprint slips was made at the Criminal Registry regarding 23,220 persons charged with offences and identity was established in 5,109 instances. There were 10,675 new records filed whilst 5,996 were deleted owing to death or because they had become valueless in consequence of the efflux of time. Since the start of the Registry in 1904 a total of 306,300 records have been filed, of which 74,932 have been deleted leaving 231,368.

There were 246 persons banished from the Federated Malay States during the year.

The control of traffic throughout the Federated Malay States and the registration of motor vehicles in Perak and Selangor involved the Police in great deal of work. To cope with registration the staff, equipment and accommodation were inadequate.

The Police tested 4,660 drivers and issued 1,843 certificates of competency. A total of 872 motor accidents were investigated; they involved 76 deaths and 579 injured persons.

Revenue collected by the Police Traffic and Registration Branches totalled $846,761.05.

PRISONS.

Description.—Of the six prisons in the Federated Malay States, the one at Taiping is primarily a convict prison. The others at Batu Gajah, Kuala Lumpur, Seremban, Kuala Lipis and Kuantan are local prisons.

Prisoners are also detained for short periods in lock-up cells at certain police stations.

Vagrants are confined to special vagrant wards.

Population.—The total daily average population of all the prisons which, in 1935, was 994.84 decreased to 980.33 in 1936.

At the beginning of 1936 there were 1,074 prisoners remaining and 5,743 were admitted during the year. On the 31st December, 1936, there were 854 prisoners remaining in all the prisons after 5,953 discharges, 6 deaths and 4 executions.

Health.—The health of the prisoners was good.

Juvenile Offenders.—Juvenile offenders are sent to the Reformatory at Singapore as there is no special institution for their reception in the Federated Malay States. This Reformatory is administered by the Education Department.

There is no probation system.

CHAPTER XIV.

Legislation.

During 1936 fifty-three Federal Enactments were passed, of which the following are the more important:

No. 1.—The Revised Edition of the Laws (Operation) Enactment. This Enactment incorporates in the Revised Edition, prepared by Mr. W. S. Gibson, C.M.G., the amendments passed during the year 1935 to the various Enactments contained in the Revised Edition. This course was necessary in view of the fact that although the Revised Edition contains the law in force on the 31st December, 1934, it was not brought into operation till the 20th February, 1936. This Enactment is therefore formal and reproduces the exact effect of the laws already passed by the Federal and State Councils.

No. 5.—The Customs Enactment. This Enactment re-enacts the Customs Enactment, 1923, with a number of alterations found essential in practice and some amendments necessary to clarify the law. The definition of "value" differentiates between goods imported by post and goods imported otherwise than by post and in each case gives a simple working rule. Section 18 legalises the exemption of certain persons, e.g. the Consuls, from the payment of Customs duties, while section 21 permits the claim to pay duty at preferential rate on goods already removed from the post office provided notice in writing of such claim is given at or before the time of such removal. Sections 49 and 50 afford further safeguards against smuggling. Section 114 (ii) makes the presumption that any uncustomed goods are uncustomed to the knowledge of the defendant unless the contrary is proved. The powers of the Chief Secretary have been transferred to the High Commissioner.

No. 10.—The Chief Secretary (Devolution of Powers) Enactment. This Enactment is intended as a temporary expedient to make provision for the exercise of the statutory and other powers of the Chief Secretary to Government and the performance of his obligations during the period of transition between the abolition of the post of Chief Secretary to Government and the passing of specific legislation amending each of the numerous Enactments affected. These powers are exercised by the High Commissioner or some public officer nominated by him for that purpose. The Enactment also provides for the vesting of property previously held by the Chief Secretary to Government.

No. 14.—The Bankruptcy (Amendment) Enactment. This Enactment provides a simplified procedure in bankruptcy by which an administration order instead of an adjudication order may be made in the case of a wage-earner whose salary does not exceed $350 p.m. The debts, however, should not have been incurred in trading.

No. 17.—The Revised Edition of the Laws (Annual Supplements) Enactment. This Enactment provides statutory authority for the preparation of annual supplements to the laws of the Federated Malay States. These supplements will be cumulative and will contain the Enactments passed between 1st January, 1935, and the 31st December of the year preceding the year in which the Supplement is issued. This means that all the laws of the Federated Malay States will be contained in the Revised Edition (containing the enactments in force on 31st December, 1934) and the last annual supplement.

No. 18.—The Assignments Enactment. This brings the law of the Federated Malay States into line with the law of England and the Straits Settlements.

No. 21.—The Federated Malay States Railways Provident Fund Enactment. This Enactment provides for the creation of a Provident Fund applicable to future appointees to any of the posts contained in the Schedule and to any of the present holders who are not on the pensionable establishment. The basis of the scheme is equal contribution by the contributor and by Government of seven and one half per centum of the depositor's salary until the depositor has completed fifteen years satisfactory service when the contributions become six and nine per centum respectively.

No. 24.—The Opium and Chandu (Amendment) Enactment. This Enactment gives effect to the Agreement signed at Bangkok on the 27th November, 1931, pursuant to the Conference on the suppression of opium-smoking convened under Article XII of the Geneva Opium Agreement and generally gives more effective control over opium-smoking.

No. 37.—The Rubber Regulation Enactment. This Enactment consolidates and amends the law relating to the regulation of the production, export and import of rubber. Section 5 makes the Controller of Rubber a corporate body and ensures continuity of office from one Controller to another. Section 11 controls the importation of low grade rubber into the Federated Malay States from the neighbouring countries. Section 16 (i) alters the law by imposing a cess only on rubber grown in and exported from the Federated Malay States instead of upon rubber generally, while section 18 (iii) permits the owner to have in his possession rubber in the course of treatment in addition to the stocks permitted by section 18 (ii). Illegally planted rubber can be ordered to be destroyed under section 19 (iv) and sections 28 and 29 provide for the forfeiture of rubber seized whether the accused is convicted or not.

No. 40.—The Diseases of Animals Enactment. This Enactment follows the provisions relating to animals contained in the Quarantine and Prevention of Disease Enactment, 1903.

No. 41.—The Penal Code (Amendment) Enactment. This Enactment follows similar legislation in the Straits Settlements and gives effect to a decision of an International Convention that no distinction should be drawn between offences committed in respect of foreign and domestic currency. Section 7 repeals the provision which makes a breach of contract a criminal offence. This is a matter for the civil Courts.

No. 43.—The Post Office Savings Bank Enactment. This Enactment consolidates and amends the law relating to Savings Bank. Section 9 requires the prior approval of the Secretary of State for any alteration of the rate of interest payable to depositors, and prior notice in the *Gazette* of at least three months of any change of rate. Section 13 makes special provision when the revenue of the Savings Bank shall be insufficient to defray the interest due to depositors in any year. Section 15 confers power to settle disputes by arbitration. Section 16 exempts deposits from attachment but authorises the Director-General to retain in the account a sum sufficient to satisfy any judgment of Court.

No. 47.—The Theatres and Places of Public Amusement Enactment. This Enactment is comprehensive in that it aims to control all public amusements and theatrical performances including cinematograph exhibitions. A public amusement is defined as an entertainment in which members of the public take part while a theatrical performance is an entertainment in which the members of the public do not take part. Section 13 exempts horse-racing, athletic sports or games from the provisions of this Enactment.

No. 53.—The Tea Control Enactment. This Enactment provides a simplified form of control over the production of tea by restricting planting and prohibiting the export of tea seed.

CHAPTER XV.

Public Finance and Taxation.

Budget for 1936.—The Estimates of Revenue and Expenditure for the year 1936 provided for a revenue of $57,813,826 (excluding Railway Revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway expenditure on Revenue Account) of $55,632,142.

Actual Revenue and Expenditure.—The actual revenue for the year was $68,090,902, while expenditure came to $52,702,228. There was thus a surplus of $15,388,674 against an estimated surplus of $2,181,684.

Revenue Analysed.—The excesses and shortages in revenue as compared with the estimate were:

	Excesses.	Shortages.
Customs	$ 7,844,823	—
Excise	—	$705,593
Forests	253,174	—
Lands and Mines	—	79,669
Licences and Internal Revenue	294,399	—
Fees of Court or Office, etc.	320,595	—
Municipal	112,230	—
Light, Water, Power, etc.	479,603	—
Posts, Telegraphs and Telephones	—	167,863
Timber and Minor Forest Products	468,033	—
Rents on Government Property	24,038	—
Interest	436,313	—
Miscellaneous	796,995	—
Land Sales	197,541	—
Sale of Property	6,000	—
Colonial Development Fund grants	—	3,543
Total	**$11,233,744**	**$956,668**

Nett excess $10,277,076.

The excesses and shortages in Customs, Excise, Lands and Mines, Licences and Internal Revenue, Municipal and Light, Water, Power, etc., revenue as compared with the estimate were:

	Excesses.	Shortages.
(*a*) **Customs—**		
Export Duty on Tin	**$5,910,254**	
,, **Rubber**	**817,180**	
Import Duty on Tobacco	**258,476**	
,, **Spirits**	**55,548**	
,, **Petroleum**	**220,110**	
,, **Kerosene**	**23,677**	
,, **Sugar**	**195,657**	
,, **Oils**	—	$ 94,644
,, **Textiles**	**351,409**	
Other Items	**107,156**	
Total	**$7,939,467**	$ 94,644

Nett excess $7,844,823.

	Excesses.	Shortages.
(*b*) Excise—		
Sale of Chandu	—	... $721,881
Other Items	$16,288	
Nett shortage $705,593.		
(*c*) Lands and Mines—		
Land Rents (Recurrent)	—	... $125,117
Other Items	$45,448	
Nett shortage $79,669.		
(*d*) Licences and Internal Revenue—		
Traction Engines and Motor Cars ...	$ 9,065	
Other Items	285,334	
Total excess ...	$294,399	
(*e*) Municipal—		
General Assessment	$ 23,363	
Other Items	88,867	
Total excess ...	$112,230	
(*f*) Light, Power, Water, etc.—		
Light	$379,486	
Water	90,761	
Slipway	9,356	
Total excess ...	$479,603	

The excess under Timber and Minor Forest Products is accounted for by the proceeds of the sale of the entire stock of sleepers in the hands of the Forest Department on 1st January, 1936, to the Railway Department.

The excess under Interest is accounted for by increase of investments due to improvement of financial position.

The excess under Miscellaneous is principally due to the following:

(*a*) Appreciation of investments on valuation at middle market prices ...	$391,201
(*b*) Gain on Exchange	173,724
(*c*) Transfer of unspent balance of 6 per cent. Straits Settlements Sterling Loan	128,961

The excess under Fees of Court, etc., is accounted for by general increases over all items of revenues, that under Forests mainly by increases in extraction of timber.

The shortage under Posts and Telegraphs is due mainly to a change of system in accounting for telephone subscriptions from a quarterly, half-yearly or yearly to a monthly basis, which resulted in a readjustment of telephone prepayments.

Expenditure Analysed.—The savings and excesses in expenditure as compared with the estimate were:

Head of expenditure.	Savings.	Excesses.
Charges on account of Public Debt	$ 66,303	
Pensions, Retired Allowances, Gratuities, etc.	652,354	
The High Commissioner	2,647	
The Federal Secretary	14,899	
The Rulers and Chiefs	23,468	
The Residents	4,764	
Malayan Civil Service and Malay Administrative Service	70,627	
Agriculture	27,034	
Audit	7,640	
Chinese	10,789	
Clerical Service	32,430	
Clerical Service (States)	—	$ 6.382
Colonial Development Fund	201	
Co-operative Societies	21,398	
Customs and Excise	94,922	
District and Land Offices, etc.	44,527	
Drainage and Irrigation Department	24,414	
Drainage and Irrigation—Annually Recurrent	36,528	
Drainage and Irrigation—Special Services	118,800	
Education	136,674	
Electrical	—	128,189
Estate Duty Office	—	7,881
Exchange	10,000	
Fisheries	—	14,401
Forests	45,068	
Game Warden	9,087	
Geological Survey	3,876	
Government Gardens and Plantations	5,879	
Indian Interpreters	4,236	
Labour	—	24,531
Legal Adviser	2,521	
Malayan Establishment Office	13,184	
Marine	20,605	
Medical and Health	171,515	
Military	125,318	
Mines	24,194	
Miscellaneous Services	—	434,414

Head of expenditure.	Savings.	Excesses.
Municipal	$223,035	
Museums	208	
Office of Registrar of Titles	49	
Office of the Public Trustee	—	$ 34
Police	57,002	
Posts and Telegraphs	134,390	
Printing	16,854	
Prisons	67,468	
Public Works Department	69,475	
Public Works—Annually Recurrent	76,257	
Public Works—Special Services	972,163	
Purchase of Land	17,504	
Railways	—	18,559
Surveys	87,648	
Town Planning	2,349	
Transport	—	2,866
Transport Licensing Board	—	10,289
Treasury	4,334	
Vehicles Department	14,260	
Veterinary	9,062	
Total ...	$3,577,460	$647,546

Nett savings $2,929,914.

EXCESSES.

(*a*) *Clerical Service* (*States*).—This is due to replacement of General Clerical Service Clerks by State Service Clerks. The total Clerical Service shows a saving of $26,048.

(*b*) *Electrical*.—The excess is explained by the continued increased activities of the Department necessitating increased provision for maintenance in the State of Selangor.

(*c*) *Estate Duty Office*.—The excess is principally due to the provision made during the year for the post of the Collector which was provided for under Civil Service.

(*d*) *Fisheries*.—The excess is explained by the contribution of $15,000 made towards the cost of experiment in brine freezing.

(*e*) *Labour*.—The excess is due to the increased share of cost of repatriation of decrepit and unemployed Indian Immigrants.

(*f*) ***Public Trustee.***—The excess is explained by increases to the votes due to increased activities.

(*g*) ***Railways.***—The excess is caused by provision made during the year for Capital Expenditure.

(*h*) ***Transport.***—The excess is accounted for by more movements of the officers than was anticipated.

(*i*) *Transport Licensing Board.*—This excess is caused by provision for the creation of this new department during the year.

(*j*) *Miscellaneous Services.*—The provision of the following large items during the year caused the excess on this vote:

1. Grant to H.H. the Sultan of Selangor	$ 66,993
2. Write off of debt due from Tungku Musa Eddin	98,863
3. Expenses in connection with H.H. the Sultan of Selangor's visit to England	38,619
4. Balance contribution towards the Federal and Selangor Shares of the M.E.O. expenditure in respect of 1934	148,550
5. Publication of Vol. III of the Birds of Malay Peninsula	10,475
6. Payment of interest on Rubber Fund for 1934 and 1935	12,780
7. Compensations	6,500
8. Cost of compilation and printing of the revised edition of the F.M.S. Laws	6,739
9. Supplements to Decrepit Ward Fund	11,666
10. Supplements to Tai Wah Fund	7,735
11. Supplements to Tung Shin I Yuen Fund	4,490
12. Supplements to Conservancy Fees	2,092

SAVINGS.

(*a*) *Pensions, Retired Allowances, Gratuities, etc.*—The following large items accounted for the savings:

Gratuities (over-estimate)	$368,000
Superannuations, etc. (unpaid in 1936) ...	284,000

(*b*) *Drainage and Irrigation, Special Services.*—Schemes modified and abandoned accounted for about $58,000, while the balance has been or will be re-voted in 1937 as the result of slow progress.

	Personal Emoluments.	Other Charges, Annually Recurrent.
(*c*) Medical and Health ...	$ 56,000	$105,000
Military	128,000	—
Posts and Telegraphs ...	100,000	30,000
Surveys	60,000	27,000
Education	70,000	66,000
Customs and Excise ...	66,000	28,000

The savings on Personal Emoluments are generally due to filling of senior posts by junior personnel and to vacancies unfilled.

The savings on Other Charges, Annually Recurrent, are also general, the large items being:

(i) $31,000 on Diets under Medical and Health.

(ii) $30,000 on Maintenance of Lines under P. and T.

(iii) $18,000 on Field Allowances under Surveys.

(iv) $40,000 on Grants-in-Aid under Education.

(v) $13,000 on working expenses of Chandu shops under Customs.

(*d*) *Municipal.*—The savings totalled to $223,035 and accounted for principally by the following:

Personal Emoluments	$ 35,000	
Other Charges, Annually Recurrent	70,000	(Anti-Malarial Work $31,000 and Street Lighting $32,000)
Other Charges, Special Expenditure	100,000	(New Market, K.L., $85,000 and San Peng Road $12,000)

(*e*) *Public Works, Extraordinary.*—Practically the whole amount has been or will be re-voted in 1937. Deferment of schemes, late delivery of supplies and shortage of staff are said to be the main contributory causes for failure to spend so large a proportion of the provision.

Public Debt.—The total amount of public debt on 31st December, 1936, was $65,285,715, being:

1931 4½ per cent. Federated Malay States Local Loan, 1959	$16,000,000
1935 3 per cent. Federated Malay States Sterling Loan, 1960-70	34,285,715
1936 3 per cent. Federated Malay States Local Loan, 1956-66	15,000,000

as against $94,471,429 on 31st December, 1935, made up of

1921 6 per cent. Straits Settlements Sterling Loan	$44,185,714
1931 4½ per cent. Federated Malay States Local Loan	16,000,000
1935 3 per cent. Federated Malay States Sterling Loan	34,285,715

The 6 per cent. Straits Settlements Sterling of $44,185,714 was redeemed in December, 1936, by means of the statutory and supplementary Sinking Funds created for the purpose and by raising the 3 per cent. Federated Malay States Local Loan of $15,000,000 in July, 1936, at par, to meet the deficiency in the Sinking Funds.

The sinking funds contributions in respect of the above three loans outstanding on 31st December, 1936, viz.: (*a*) 3 per cent. Federated Malay States Sterling Loan of £4,000,000 issued at par in June, 1935, (*b*) 4½ per cent. Federated Malay States Local Loan of $16,000,000 issued at 98 in May, 1931, and (*c*) 3 per cent. Federated Malay States Local Loan of $15,000,000 issued at par in July, 1936, amounted to $1,325,808 on 31st December, 1936, as follows:

3 per cent. Sterling Loan	$520,515
4½ per cent. Local Loan	511,086
3 per cent. Local Loan	—
Supplementary	292,207

Assets and Liabilities.—The following statement shows the assets and liabilities on the 31st December, 1936:

GENERAL BALANCE SHEET, 31st DECEMBER, 1936.

LIABILITIES.		$	c.
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959), Balance at credit thereof (*a*)		$3,636,702	49
Due to other Governments—			
India (Agency Account) ...	$186,906.09		
India (Current Account) ...	9,367.91		
Ceylon (Agency Account) ...	60,111.46		
Kedah (Current Account) ...	166.08		
Sarawak (Current Account)	2.00	256,553	54
Family Remittances		81	33
Sundry Outstanding Accounts		27,119	63
S.S. Government War Service Land Grant Scheme		5,632	03
Deposits—			
Courts	$191,168.96		
Forests	224,933.39		
Lands	240,981.86		
Postal	221,132.14		
Postal Account Stores, Colony	300,000.00		
„ „ Kedah	70,000.00		
„ „ Kelantan	5,000.00		
Planters Loans' Board	600,000.00		
Miscellaneous ...	1,112,570.45	2,965,786	80
Selangor River Protection Reserve Account		29,115	69
Sungei Buloh Coupons Reserve Account		1,500	00
Sundry Funds—			
Police Fine and Reward Fund...	$ 48,008.40		
Public Officers' Guarantee Fund	439,974.08		
Rubber Experimental Research & Propaganda Reserve Fund ...	2,009,978.82		
Philips' Agricultural Scholarship Fund ...	5,824.31		
Rembau Waris Fund	97,401.78		
Miscellaneous ...	48,454.49	2,649,641	88
Opium Revenue Replacement Reserve Fund		29,082,336	87
Surplus		76,159,818	72
		114,814,288	98

ASSETS.		$	c.
Cash—			
In Treasuries and Banks	$7,028,608.30		
In Agencies	117,661.06		
In Transit	362,940.07		
Fixed Deposits	12,868.37		
Joint Colonial Fund (Crown Agents)	32,271,428.57	39,793,506	37
Investments—Surplus Funds (at valuation)—			
Sterling Securities	$12,772,132.36		
Dollar Securities	1,812,887.50	14,585,019	86
Investments—Opium Revenue Replacement Reserve Fund (at valuation)—			
Sterling Securities	$21,796,622.58		
Perak River Hydro-Electric Power Coy. Ltd. Shares ...	7,285,714.29	29,082,336	87
Investments, Specific Funds (at valuation)—			
Police Fine and Reward Fund ...	$ 42,825.18		
Public Officers' Guarantee Fund	418,764.96		
Philips' Agricultural Scholarship Fund	5,723.25		
Rembau Waris Fund	70,282.00	537,595	39
Suspense—General		15,485	06
Suspense—Stores and Materials—			
Post Office	$ 607,549.72		
P.W.D....	220,139.23		
Electrical	557,461.54		
Marine Slipway	12,107.44		
Minor Forest Products	9,998.94		
Punjabi Regiment	110,972.00	1,518,228	87
Advances—			
Due by other Governments ...	$ 90,978.46		
Due by Railways	110,390.85		
Central Health Board	113,676.43		
Bentong Tailings Retention Scheme	189,534.40		
Others	332,051.94	836,632	08
Imprests		82,357	63
Loans—			
Siamese Government (*b*) ...	$ 24,794,674.93		
Kelantan „	300,000.00		
Planters	1,201,726.96		
War Service Land Grant Scheme	1,081,923.56		
Agricultural	8,628.05		
Buildings	111,255.79		
Miscellaneous...	864,917.56	28,363,126	85
		114,814,288	98

(*a*) The F.M.S. 4½ per cent. Local Loan, 1959, appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of the issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) The repayment of the loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

NOTE:

(i) The F.M.S. 3 per cent. Sterling Loan, 1960-70 of £4,000,000 ($34,285,714.29) raised for the purpose of redeeming the 4½ per cent. Straits Settlements Sterling Loan, 1935-45, of £4,200,000 appears on the credit side of the Capital Account (*vide* Appendix B). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

(ii) The F.M.S. 3 per cent. Local Loan, 1956-66 of $15,000,000 raised to meet the deficiency in the Sinking Funds for the redemption of the Straits Settlements 6 per cent. Sterling Loan, on the optional date appears on the credit side of the Capital Account (*vide* Appendix D). The loan is repayable by Sinking Fund, the instalments of which are to be provided out of revenue.

Railways.—The result on the year's working, after allocation of $1,927,045 from revenue to the Renewals Fund and exclusive of the direct contribution of $1,000,000 to the fund from the general Government revenue, showed a surplus of $760,612, which also was credited to the Fund.

Loan to Siam.—The loan to the Siamese Government of £4,630,000 ($39,685,714), which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $24,794,675 on 31st December, 1936, having been reduced by the payment of the thirteenth instalment due on 1st January, 1936.

Loan to Brunei.—The loan to Brunei which stood at $133,000 on 31st December, 1935, was fully repaid in January, 1936.

Loan to Kelantan.—The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1936.

Loans—Planters, War Service, etc.—The total amount of Planters and War Service loans outstanding on 31st December, 1936, was $2,283,650 against $2,831,450 on 31st December, 1935.

Other Loans.—Miscellaneous loans outstanding on 31st December, 1936, amounted to $984,801 compared with $930,650 on 31st December, 1935.

Surplus.—The surplus on 31st December, 1935, was $60,771,145. As the revenue for the year exceeded the expenditure by $15,388,674, the surplus was increased to $76,159,819 on the 31st December, 1936.

The gross liquid assets in cash and easily realisable investments, exclusive of investments ear-marked for specific purposes, amounted to $54,378,526. After deduction of cash liabilities, the net liquid surplus is $45,343,988 at the end of the year as compared with the corresponding figure of $27,722,135 at the end of 1935.

Buffer Pool Tin Scheme.—The nett amount of $4,982,444 due to the contributors to the Buffer Pool Tin Scheme and outstanding on 31st December, 1935, was distributed in January, 1936.

Rubber Fund.—This fund which was started on 1st June, 1934, on introduction of rubber regulation and stood at $1,487,616 on 31st December, 1935, was reduced to $1,141,767 on 30th September, 1936, by payment of the regulation and other incidental expenses connected therewith. The balance of $1,141,767 was paid to the Controller of Rubber when the control and management of the Fund was taken over by him with effect from 1st October, 1936, in accordance with Enactment No. 37 of 1936.

Rubber Experimental Research and Propaganda Fund.—This fund which was created by an allocation of $2½ millions in 1930 and stood at $2,095,693 on 31st December, 1935, was reduced to $2,009,979 on 31st December, 1936. This balance of $2,009,979 together with commitments outstanding on 31st December, 1936, will be handed over to the Rubber Fund for future administration in accordance with a resolution of the Federal Council on 6th November, 1936.

Opium Revenue Replacement Reserve Fund.—This fund was started with $10 millions provided out of revenue in 1925; with $9,828,503, representing contribution at 15 per cent. of annual revenue from Chandu Sales for the years 1926 to 1930, and with the accumulated interest from inception to 31st December, 1930, and for the year 1936 stood at valuation on 31st December, 1936, at $29,082,337.

The interest earned on this fund for the five years 1931 to 1935 was credited to revenue and contributions to the fund have been suspended since 1931.

Federated Malay States Sterling Loan Capital Account.—A statement of the 3 per cent. Sterling Loan Account is published as Appendix B to this report showing that the proceeds have been utilised for the redemption of 4½ per cent. Straits Settlements Sterling Loan.

Federated Malay States Local Loan Capital Accounts.—(*a*) A statement of the 4½ per cent. Local Loan Capital Account is published as Appendix C to this report. Of the total proceeds of $15,640,000, expenditure on Railway, Electrical and Public Works accounted for $12,003,298, leaving a balance of $3,636,702 still available to meet capital expenditure in 1937 and subsequent years.

(*b*) A statement of the 3 per cent. Local Loan Capital Account is published as Appendix D to this report showing that the proceeds have been utilised for the redemption of the 6 per cent. Straits Settlements Sterling Loan.

The following is a summary of the Customs tariff:

TABLE A.

IMPORT DUTIES.

Description of article.	Unit.	Full duty.	Preferential duty.
I.—Intoxicating liquors:		$ c.	$ c.
(*a*) Rectified spirit	Per proof gallon	14 00	
(*b*) Brandy and any other intoxicating liquor not hereinafter provided for	,,	14 00	10 50
(*c*) Brandy in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit	Per gallon	10 50	8 00
(*d*) Whisky, rum and gin	Per proof gallon	13 00	
(*e*) Whisky, rum and gin in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit	Per gallon	9 50	
(*f*) Toddy arrack, saki and samsu including medicated samsu	Per proof gallon	12 00	
(*g*) Bitters and liqueurs not exceeding 100 per cent. of proof spirit	Per gallon	13 00	
(*h*) Sparkling wines not exceeding 42 per cent. of proof spirit	,,	6 00	5 00
(*i*) Still wines exceeding 26 per cent. but not exceeding 42 per cent. of proof spirit	,,	4 50	3 90
(*j*) Still wines not exceeding 26 per cent. of proof spirit	,,	1 50	90
(*k*) Ale, beer, stout, porter, cider and perry	,,	1 30	1 20
II.—Tobacco:			
(*a*) Cigars and snuff	Per pound	1 60	
(*b*) Cigarettes	,,	1 10	1 00
(*c*) Unmanufactured tobacco	,,	70	
(*d*) Manufactured tobacco excluding cigars, cigarettes and snuff			
(i) if imported for sale to the public in air-tight tins or containers	,,	1 10	1 00
(ii) not otherwise provided for	,,	80	

Description of article.	Unit.	Full duty.	Preferential duty.
		$ c.	$ c.
III.—Petroleum :			
(*a*) Kerosene with a flashing point higher than 73°F but below 200°F	Per gallon	15	
(*b*) Petrol	,,	35	
IV.—(*a*) Sugar, including sucrose, saccharose, cane sugar, beet sugar, maple sugar, palm sugar, gula malacca, gula kabong, gula nipah, gula kachang, jaggery, sugar candy, sugar cane, molasses, treacle, golden syrup, maple syrup, dextrose, glucose, grape sugar, starch sugar, corn sugar, starch syrup, corn syrup, wheat syrup, wheat jelly, rice jaggery, laevulose, fructose, fruit sugar, invert sugar, honey lactose, milk sugar, maltose and malt sugar	Per pound	05	03
(*b*) Sweets, chocolates, confectionery, and any other products containing more than sixty parts per centum by weight of any one or more of the sugars enumerated under IV (*a*)	,,	05	03
(*c*) Syrups, cordials, fruit juices and other solutions containing more than forty parts per centum by weight of any one or more of the sugars enumerated under IV (*a*)	Per gallon	50	30
Exemptions			
(i) Sweets, chocolates, and confectionery in manufacturers' unopened original tins, bottles, cartons or boxes containing not more than two pounds nett weight.			
(ii) Articles which are dutiable under any other paragraph of Table A.			
V.—Cartridges other than such as are included in section 19 of the Explosives Enactment (Cap. 200)	Per 1,000	1 00	Free
VI.—Matches :			
Containers with—			
(i) not more than 10 matches	Per 100 containers	12	

Description of article.	Unit.	Full duty.	Preferential duty.
VI.—Matches—(*cont.*)		$ c.	$ c.
Containers with—			
(ii) more than 10 but not more than 20 matches ...	Per 100 containers ...	24	
(iii) more than 20 but not more than 50 matches ...	,, ...	60	
For every additional 25 matches or part of 25 matches over 50 in a container, a duty additional to the duty under (iii) ...	,, ...	30	
VII.—Edible oils and fats :			
(*a*) (i) Kachang and groundnut oil ...	Per pound ...	04 ...	01
(ii) Gingelly oil ...	,, ...	02 ...	Free
(*b*) Butter, tinned ...	,, ...	05 ...	Free
(*c*) ,, frozen ...	,, ...	05 ...	Free
(*d*) Magarine ...	,, ...	05 ...	Free
VIII.—Cement ...	Per ton ...	12 00 ...	6 00
IX.—Cement manufactures other than tiles ...	,, ...	2 00	
X.—Tiles :			
(i) Roofing ...	,, ...	12 00	
(ii) Flooring and wall ...	,, ...	12 00 ...	10 00
XI.—Cosmetics and perfumery ...	*Ad valorem* ...	25% ...	Free
XII.—Textiles and apparel :			
(*a*) Piece goods made of cotton, linen, artificial silk, and all mixtures made of cotton, linen, artificial silk, silk and, or, other materials ...	*Ad valorem* or per yard ...	20% ... or 5 cents per yard whichever is higher	10% or 2½ cents per yard whichever is higher
(*b*) Cotton, linen, jute, silk or artificial silk, felt, flannel, woollen and all textile goods made from plant fibres, whether finished goods or not, other than yarn, thread, gunnies and waste, except as provided in (*a*) above ...	*Ad valorem* ...	20% ...	10%
(*c*) Wearing apparel not otherwise provided for, including boots, bootees, shoes, overshoes, slippers and sandals of all descriptions and of whatever material finished or unfinished, other than articles specified in the next following item ...	,, ...	20% ...	10%

Description of article.	Unit.	Full duty. $ c.	Preferential duty. $ c.
XII.—Textiles and apparel—(*cont.*)			
(*d*) Boots, bootees, shoes, overshoes, slippers and sandals of all descriptions made wholly or partly of rubber, balata or gutta percha (except where the outer part of the uppers, apart from stitchings, fastenings or ornaments, is made entirely of leather or leather and elastic)	Per pair	50	10
(*e*) Rubber soles	,,	25	05
XIII.—Tanned hides and skins, leather and imitation leather, leather and imitation leather manufactures other than fancy goods	*Ad valorem*	10%	Free
XIV.—Cycles and accessories :			
(*a*) Cycles—complete	Each	4 50	1 50
Saddles	,,	30	10
Frames—complete	,,	3 00	1 00
Frames—parts of	Per piece	15	05
Handlebars—with fittings and otherwise	Each	30	10
Rims	,,	30	10
Chains	,,	30	10
Cycle pumps	Per dozen	30	Free
(*b*) Cycle tyres (outer covers)	Per cover	15	08
,, inner tubes	Per tube	06	03
(*c*) Motor and motor-cycle tyres (outer covers)	*Ad valorem*	20%	Free
(*d*) Motor and motor-cycle inner tubes	,,	20%	,,
XV.—Musical instruments other than pianos. Wireless receiving and transmitting sets and parts thereof including gramophones, electrical gramophones or reproducers, phonographs, records, needles, valves and other parts or accessories	,,	10%	Free
XVI.—Ground-nuts	Per pound	00¾	Free
XVII.—Milk (including cream), condensed, desiccated or preserved	For 100 lbs. nett weight	5 00	1 00
XVIII.—Fruits, jams, marmalade, vegetables, fish, meats and soups in metal, glass, or earthenware containers	*Ad valorem*	15%	Free
XIX.—Printing paper	,,	10%	Free
XX.—Manufactured brass, bronze, and copperware	,,	15%	5%

Description of article.	Unit.	Full duty. $ c.	Preferential duty. $ c.
XXI.—(*a*) Batteries and parts thereof for electric torches or hand-lamps	*Ad valorem*	20%	5%
(*b*) All other electric batteries and parts thereof	,,	15%	Free
XXII.—Paraffin wax and articles made thereof	,,	15%	5%
XXIII.—Fish maws and sharks' fins	,,	15%	5%
XXIV.—Umbrellas and lamp-shades covered with silk, artificial silk or cotton	,,	10%	5%
XXV.—Tea	Per pound	08	06
XXVI.—Saccharine	,,	5 00	
XXVII.—Fireworks and crackers	,,	10	

TABLE B.

EXPORT DUTIES.

I.—AGRICULTURAL PRODUCTS.

Description of article.	Duty.
Gambier	15 cents per pikul
Gutta-percha (cultivated) meaning gutta-percha produced from any of the trees mentioned in the Customs tariff which have been cultivated on alienated land to the satisfaction of the Commissioner of Customs and Excise	2½ per cent. *ad valorem*
Rubber	1 per cent. *ad valorem* when price is under 20 cents per pound, to 3¼ per cent. when price is 35 cents or over

II.—FOREST PRODUCTS.

Description of article.	Duty.
Rembia ataps	10 per cent. *ad valorem*
Nipah ataps—	
(*a*) Bertindeh tulang	$1.50 per 1,000
(*b*) Bertumu tulang	$1.00 ,,
(*c*) Bertumu daun	.75 ,,
(*d*) Other kinds	10 per cent. of the wholesale prices in the centres of production
Getah rambong (India-rubber)	$5 per pikul
Formosa camphor	10 per cent. *ad valorem*
Kepong bark	10 ,, ,,

III.—MINERALS, METALS AND METALLIFEROUS ORES.

Description of article.	Duty.
Tin-ore—	
When the price of tin does not exceed $41 per pikul	$2.40 per pikul
When the price of tin exceeds $41 but does not exceed $42	$2.52 ,,
When the price of tin exceeds $42 but does not exceed $43	$2.64 ,,
and so on, the duty per pikul being increased by 12 cents per every dollar by which the price of tin exceeds $41.	
In the case of tin-ore exported otherwise than under such guarantees as the High Commissioner may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul.	
Tin, smelted or manufactured from tin-ore won in the Federated Malay States	On the same scale as that for tin-ore, together with an additional duty of one-third of the duty on tin-ore
Additional duty on all tin-ore exported	10 cents per pikul or part of a pikul
Tin slag and hard-head of tin ...	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smelted or manufactured on the amount of tin estimated to be contained in such consignment
Scheelite	$2 per pikul
Wolfram	$2 ,,
All other metals and metalliferous ores excluding gold	10 per cent. *ad valorem*
China-clay or kaolin	75 cents per ton
Potash-felspar or soda-felspar intended for use as a flux or a glaze	2½ per cent. *ad valorem*
China-stone	2½ ,, ,,

IV.—(*a*) MISCELLANEOUS.

(*Perak, Selangor and Negri Sembilan.*)

Description of article.	Duty.
Blachan	50 cents per pikul
Fish, dried and salted	10 per cent. *ad valorem*
Fish maws, fish refuse, ikan gelama, prawns (dried)	10 ,, ,,
Oysters, fresh	$5 per pikul
Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins ...	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,

IV.—(*b*) MISCELLANEOUS.

(*Pahang only.*)

Description of article.	Duty.
Fish dried—	
Class A (i) Sharks' fins	$1.50 per pikul
,, A (ii) Tenggiri, ikan merah, kachang, selor, bileh, bawal, talang ...	.75 ,,
,, B Selor kuning	.60 ,,
,, C Pelata, gelama, selor, puchat, lema	.50 ,,
,, D Kembong, Khe'kheh, selayang	.40 ,,
,, E Tamban, udang, blachan, ikan yu	.30 ,,
,, F Rambai, layor, pari, duri, bakau, budu and all other fish not mentioned above	.15 ,,
Oysters, dried, mother-of-pearl shell and beche-de-mer	10 per cent. *ad valorem*
Horns, tanned skins, raw or dressed hides, bones and tallow	10 ,, ,,

IV.—(*c*) MISCELLANEOUS.

Description of article.	Duty.
Elephants	20 per cent. *ad valorem*

EXCISE DUTIES.

Description of article.	Duty.	A.	B.
Chinese samsu including medicated samsu	$9 per proof gallon		
Other intoxicating liquors	$11 ,, ,,		
Matches : containers in which there are :			
(i) not more than 10 matches ...	Per 100 containers	9 cents	8 cents
(ii) more than 10 but not more than 20 matches	,, ,,	18 ,,	16 ,,
(iii) more than 20 but not more than 50 matches	,, ,,	45 ,,	40 ,,
For every additional 25 matches or part of 25 matches over 50 in a container : a duty additional to duty under (iii)		22½ ,,	20 ,,

The rates in column "A" apply where both the matches and the containers are made from imported timber.

The rates in column "B" apply where both the matches and the containers are made from local timber.

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—

(*a*) On sale of any property (except stock, shares and marketable securities).—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

(*b*) Of any stock, shares or marketable securities.—Ten cents (or 30 cents in certain cases) for every $100 or part of $100 of the value thereof on date of the transfer.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVI.

Miscellaneous.

ELECTRICAL DEPARTMENT.

The continued improvement in general industrial conditions during the year, especially in the tin mining industry, resulted in a larger demand for electrical energy than ever before.

The largest consumption of energy was in Perak, the richest tin-mining State in the country. In Selangor sales of energy could have been considerably increased if the Government generating plants had been of larger capacity and no restriction imposed on the supply for industrial purposes.

The total number of units generated in the Federated Malay States during the year was 446,794,999 as compared with 297,969,927 in 1935, or an increase of 49.9 per cent.

The above units for 1936 were generated by the following prime-movers:

Water wheels	237,698,717
Steam plant	163,421,466
Oil-driven	45,597,704
Gas engine	77,112
Total ...	446,794,999

Of this total the units generated by Government power stations and power stations termed "Public and General" are as follows:

State.	Government supplies.	Public and General supplies.	Total.
Perak	2,051,695 ...	313,552,893 ...	315,604,588
Selangor	79,038,789 ...	32,505,010 ...	111,543,799
Negri Sembilan ...	1,565,146 ...	2,223,893 ...	3,789,039
Pahang	424,535 ...	15,433,038 ...	15,857,573
Total ...	83,080,165 ...	363,714,834 ...	446,794,999

The energy consumed for industrial purposes only may be classified as follows:

State.	Tin mining.	Gold mining.	Coal mining.	Other industrial uses.
Perak	308,058,420	...	...	5,494,473
Selangor	25,262,873	...	7,182,394	
Negri Sembilan ...	...	...	...	2,223,893
Pahang	10,728,841	4,429,643	...	10,800
Total ...	344,050,134	4,429,643	7,182,394	7,729,166
Total 1935 ...	194,653,207	4,540,059	6,623,260	10,400

The generating stations of the Kuala Lumpur supply were fully loaded during the year and further applications for industrial supplies had to be refused. Similarly, owing to the inadequate capacity of the Klang power station, supply in this area had to be restricted during certain hours daily.

The total number of units generated by the combined Bungsar steam station and the Ulu Langat hydro-electric station was 77,282,446 as compared with 53,297,401 in 1935, and the maximum load observed was 13,080 kilowatts.

The number of consumers connected to the Kuala Lumpur supply at the end of the year was 7,735, an increase of 551 as compared with 1935, while the connected load was 26,529 kilowatts.

Progress in some of the other larger Government undertakings is indicated as follows:

Towns.	Units generated or purchased.	
	1935.	1936.
Ipoh	3,121,997	3,492,664
Taiping	1,180,460	1,914,180
Seremban	1,194,970	1,191,741
Kuala Lipis	257,242	259,506

COMPANIES.

COMPANIES ESTABLISHED IN THE FEDERATED MALAY STATES.

During the year, 34 new companies were registered with a nominal capital of $9,125,156 as compared with 24 in 1935 with a nominal capital of $5,041,642 and 26 in 1934 with a nominal capital of $6,090,000.

The largest number of companies registered in any recent year was 56 (nominal capital $35,764,500) in 1926 and 54 (nominal capital $38,934,928) in 1920.

The main objects of the new companies were: Amusement and entertainment (2), banking and auction cheetus (2), brokers (1), birth benefit (1), charity (1), farming (1), general merchants (1), gold mining (1), investment trust (4), mining and planting (1), mining agency (1), mining (10), photography (1), rubber planting (4), rice merchants (1), rubber dealers (1) and tobacco (1).

Thirty-three companies were in voluntary liquidation and one in compulsory liquidation in the Federated Malay States. No winding-up order was made during the year.

There were 387 companies on the registers at the end of the year.

COMPANIES ESTABLISHED OUTSIDE THE FEDERATED MALAY STATES.

Twenty-three new companies were brought on to the Federated Malay States registers during the year as compared with 23 and 29 in 1935 and 1934 respectively.

The objects of these companies were briefly: Advertising (1), amusement and entertainment (1), contractors (1), chemical manufacturers (1), dealers in wines (1), fire insurance (1), general agency (2), general merchants (1), imports and exports (1), ice manufacturers (1), life assurance (2), motor engineering (2), mining (1), newspaper printing (1), rubber planting (5), tobacco distributors (1).

At the end of 1936, ten companies were known to be in voluntary liquidation; in the case of eight of these liquidations proceedings had commenced prior to 1936.

There were 694 companies on the registers at the end of the year.

At the close of the year, 67 insurance companies were on the registers; of these 44 are transacting fire insurance only, 13 life assurance only and 10 both fire and life assurance.

Thirteen banking companies were on the registers, two of which are local banks and seven were banks registered outside the Federated Malay States with places of business in the Federated Malay States. Four companies under this category were engaged in money-lending only, of these one was registered locally and three abroad.

COMPULSORY LIQUIDATION.

Two companies were still in the process of liquidation at the close of the year: one by a private liquidator and the other by the Assistant Official Assignee, Ipoh.

BANKRUPTCY.

During the year, 99 bankruptcy notices and 65 bankruptcy petitions were filed, and 46 receiving orders and 45 adjudication orders (against 49 persons) were made, as compared with 110 bankruptcy notices, 103 bankruptcy petitions, 88 receiving orders and 95 adjudication orders in 1935.

Of the persons adjudged bankrupt, 20 were Chinese, 21 Indians, 2 Ceylonese, 3 Malays and 3 Eurasians. By occupation 14 were traders, 3 miners, 1 landowner, 1 money-lender, 1 contractor, 1 amusement caterer, 1 goldsmith, 3 printers and stationers, 3 locomotive drivers, 2 railway guards, 2 commercial clerks, 2 bullock-cart drivers, 1 mechanic, 1 compositor, 1 cook, 1 mandor, 1 penghulu, 1 broker, 1 clerk and interpreter, 1 boiler-maker, 1 overseer, 1 fitter, 1 lorry driver, 1 police constable and 1 Government pensioner; the remaining two were married women.

Of the above only 11 can be described as trade bankruptcies: 1 in Perak as compared with 10 in 1935, 9 in Selangor as compared with 3 in 1935 and 1 in Negri Sembilan. The marked decrease in Perak is no doubt due to the improved conditions in trade generally in the State. The increase in Selangor may be attributed to the compulsory bankruptcy of certain moribund petty traders who for purposes of classification are described as traders.

The main Bankruptcy Office is in Kuala Lumpur and the Branch Office in Ipoh.

Nine compositions were accepted by creditors during the year. There were 27 discharges: 6 were granted absolute discharge, 13 subject to various periods of suspension and 8 subject to consent to judgment.

On 31st December there were 584 undischarged bankrupts.

There were two prosecutions against bankrupts during the year. In one case the bankrupt was convicted and fined $25 or 10 days simple imprisonment for an offence under section 102 (i) and in another the order of committal was suspended for 10 days, the offence being for contempt of Court under section 84 (ii).

The gross liabilities and assets as stated by the bankrupts were $575,938 and $281,189 respectively as compared with $1,696,336 and $1,022,029 in 1935. There were two failures with estimated liabilities of over $100,000 but under $150,000, 1 of over $50,000 but under $100,000 and 3 of over $25,000 but under $50,000.

A new element entered into the work of the office by the introduction in August of Enactment 14 of 1936, Bankruptcy Amendment. One hundred and fifty-three Wage-earner's Administration Orders were made of which 118 were against Government employees. Although these cases seldom present the complexities common to bankruptcy in general they do, however, involve a heavy increase in routine clerical work. The system, owing to its expedition and relative lack of formality, appeals even to persons on the lowest wage earning scale. It is not yet possible to conjecture whether the figure for August to December represents an initial rush of applicants or can be expected to be maintained in the future.

The total revenue for the year was $22,224 and the total expenditure $26,281.

Department of the Public Trustee and Official Administrator.

The year under review was the fourteenth year of the working of the Department of the Public Trustee.

During the year the Public Trustee accepted 15 trusts in all valued at $111,238.56 while additional assets belonging to a trust accepted in 1935 valued at $567,551.90 were taken over. Sixteen trusts were wound up and at the end of the year 98 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year was estimated at $3,612,228.

The office of the Official Administrator, Federated Malay States, created in the year 1928 is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1936 was 31 valued at $234,224.58. Thirty-six estates were wound up and at the end of the year 68 were still being administered.

The total number of trusts and estates administered by the Public Trustee and Official Administrator as at 31st December, 1936, was 166 valued at over $4,590,000. The total fees collected by the combined offices during the year amounted to $40,182.60.

Co-operation.

Expenditure.—The total expenditure for the calendar year was $117,489.

Progress.—The position at the end of the year was as follows:

Type of society.	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit ...	58	1,631	68,183	14,872	85,269
Seasonal Credit ...	4	65	442	...	442
General Purposes (Malay)	34	4,290	...	...	11,062
Urban Thrift and Loan	34	16,449	3,620,000	275,852	3,956,852
Registered, but not working	2				
Indian Labourers ...	191	31,728	701,091	4,072	705,163
Indian Labourers' Unions	3	15*			
Registered, but not working	3				
Better Living ...	5	208			
General Purposes (Indian)... ...	2	79	4,069	...	4,711
Marketing	5	86	196	14	490
Fairs	5	153			
Stores	2	283	3,260	...	3,260
Urban Co-operative Union	1	6*			
Total ...	349	54,972†	4,397,241	294,810	4,767,249

Rural Credit Societies.—Economic conditions in rural areas reflected the higher prices of rubber and coconuts which ruled during the year. There was, however, little change in the price of padi with the result that padi planters, especially in Krian where the harvest was below expectations, shared but little in the general improvement. Although loans were granted more freely than in recent years, repayments exceeded loans granted by $4,566. Total paid-up share capital showed an increase of $4,807, thus stemming the fall which has been continuous since 1930. There was also an increase in membership after a continuous decline since 1929. The four new seasonal credit societies among padi planters in Krian created wide interest and seven more are expected to apply for registration after the next padi harvest.

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* Societies. † Societies not included.

General Purposes Societies (Malay).—The number of these societies increased from 25 to 34, the chief increase being in Pahang. The use of these societies for the banking of small savings has grown considerably. The years of depression have impressed on small-holders the difficulty of obtaining at one time the cash necessary to meet such a charge as quit-rent. These savings totalled $11,062 at the end of the year. In addition, these societies carried out a great variety of activities. They built and extended schools, erected teachers' quarters, developed goat-breeding and copra manufacture, organised an agricultural show, destroyed squirrels and rats, ran a sports meeting, took in vernacular newspapers and built village meeting sheds which are also used by medical, agricultural and veterinary officers who visit the villages to give advice. They are the most elementary form of co-operative association for joint action out of which other forms may be expected to evolve.

Marketing Societies.—Two more egg-marketing societies were registered during the year bringing the total up to five societies. A sixth is under formation. The societies sold 314,034 eggs for a gross return of $7,325, of which members received $5,841. The average price of $1.86 per hundred was thus obtained; the local kampong (village) price varied throughout the year between $1.40 and $2.20 per hundred averaging $1.73 per hundred eggs.

The Dusun Tua Co-operative Rubber Society was liquidated during the year. It had ceased to function a long time ago, but several of the leading members had been unwilling to give up hope that it would be resuscitated. With the sale of coupons rather than rubber it was realised that it was useless to put off liquidation. Share capital was returned in full and the local mosque benefited from the balance of the reserve fund.

Co-operative Shops.—In rural areas small semi-co-operative shops come and go. Most of them fail owing to inefficiency of management and the granting of too generous credit. Their turnover is usually very small. Some, however, have managed to keep going and even those that have failed have had an educative value. A co-operative store society has been registered in Seremban. The members are mostly Government officers and pensioners. It had not started work at the end of the year.

Thrift and Loan Societies.—At the end of the year there were 34 societies registered and working and two societies registered but not working, as compared with 32 registered and working and one registered but not working at the end of 1935. The membership of the societies was 16,449 with subscription capital of $3,620,000 and reserves of $275,852 compared with membership of 15,765, subscription capital of $3,204,700 and reserves of $253,737 last year end.

Loans were granted to the value of $1,452,100 and there were only $4,500 overdue on loan repayments. Repayments exceeded loans granted by $58,500.

The societies took $549,700 of the loan floated during the year by the Federated Malay States Government.

Indian Labourers' Societies.—Thirty-nine new societies were registered, and at the end of the year there were 194 (3 not working) societies with membership of 31,728, subscription capital of $701,091 and reserves of $4,072 as compared with 155 (3 not working) societies with membership of 23,090 and subscription capital of $483,623 and reserves of $3,166 at the end of 1935. The average savings per member in these societies came to $22.10. They invested $275,420 in the loan floated during the year by the Federated Malay States Government.

Rural Lecture Caravan.—The rural lecture caravan which is operated jointly by the Department of Agriculture, the Rubber Research Institute and the Co-operative Societies Department did seven tours in the Federated Malay States during the year. The estimated attendance was 83,300. Three new films designed to encourage the Malay raiat and the Indian labourer to make additional savings by keeping goats and cows and by maintaining vegetable gardens were issued during the year.

LANDS.

The area in private occupation at the end of the year amounted to about 2,578,939 acres under agricultural titles and 209,810 acres under mining titles.

It is estimated that of the 27,540 square miles covered by the four States of the Federation, 15.8 per rent. is land in private occupation and 27.2 per cent. is reserved forest, while the balance of 57 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

The expenditure of this Department at $745,631 was slightly higher than for 1935. The demand for title surveys increased by 57 per cent. in Pahang and 37 per cent. in Perak while in both Selangor and Negri Sembilan there was a decrease of about 23 per cent.

The Trigonometrical Branch completed the primary and secondary triangulation of Brunei, but beyond the normal precise levelling programme no other field work was undertaken. The Topographical Branch completed the survey of an area of 422 square miles in Brunei and about 116 square miles on the Brunei-Sarawak boundary. This completes the present programme in Brunei.

Two sheets of the standard one inch to one mile topographical map of Malaya were completely revised. Revision of the 4″ to 1 mile topographical map of Singapore Island was well in hand. The 10″ to 1 mile map of Singapore Town is also being revised.

An agreement was made for the Topographical Branch to survey, for the Johore Government, the remaining sheets of the standard 1″ to 1 mile topographical map of Malaya covering that State. The programme extends over five years and work was commenced in October.

The Map Production Branch continued to produce the coupons required for rubber regulation for the whole of Malaya. Designs are changed each quarter and so far as is known no attempts at forgery have been made. Nearly seven million coupons were supplied making a total of 25 millions to date.

Routine meteorological observations were continued at the 17 main stations and at a large number of auxiliary stations. In accordance with the policy of establishing meteorological stations on aerodromes the station at Alor Star was moved to the aerodrome at Kepala Batas in August. Forecasts, covering a period of 12 hours, are issued twice daily and are posted in the aerodrome offices at Alor Star, Penang and Seletar (Singapore). In addition, forecasts are supplied on request to aeroplanes in flight. Arrangements were made for the establishment of a station at Labuan. This will be equipped in the same way as other Malayan stations and Pilot Balloon observations will also be made there. It is hoped that the station will be working next year.

GEOLOGY.

An increase in the staff of the Geological Survey Department was sanctioned, but the posts of two field geologists had not been filled at the end of the year. Leave arrangements reduced the number of geologists in the country to one, so there was no opportunity to undertake detailed field-work, except in certain mines. During the absence on leave of the Chemist, for part of the year, analyses of metals, minerals and oils that are usually done for the public and for Government departments by the Geological Survey were performed by the chemical staff of other departments. Many geological reports were made on mineral-deposits and on engineering problems. The central record of prospecting results is now frequently consulted by miners and by Government departments.

PLANTERS LOANS BOARD.

Agricultural Loans.—On 1st January, 1936, the Board had on its registers twenty-two loans aggregating $703,632.

One loan, $12,000, was transferred from urban loans during the course of the year, while nine properties repaid their loans in full to the extent of $243,155, eight others made partial repayments totalling $38,403, and balances not required by three estates, $9,900, were written back.

At the end of the year, the number of agricultural loans was thus reduced to fourteen totalling $424,173.

Urban Loans.—Urban loans, at the beginning of the year, totalled sixty-five amounting to $415,766. No new loans were made during the year. Repayment in full was made by twenty-three borrowers to the extent of $147,160 while thirty-two others made partial repayments totalling $36,488.

At the end of the year, the number of urban loans totalled forty-two aggregating $232,118.

War Service Loans.—Under the War Service Land Grant Scheme, at the beginning of the year, fifty-four ex-soldiers were indebted to the Board, in respect of the loans made to them, to the extent of $1,136,450.

No loans were repaid in full during the course of the year but partial repayments were made by forty-seven borrowers to the extent of $114,290 while one loan of $25,000 was written off.

At the end of the year, therefore, the number of borrowers continuing to benefit under the Scheme was fifty-three and the amount outstanding totalled $997,160 to which falls to be added $84,764 being advances to properties under the Board's administration giving a gross sum outstanding of $1,081,924.

Interest.—Interest earned during the year amounted to $123,064 of which $47,539 was in respect of agricultural loans, $23,334 in respect of urban loans and $52,191 in respect of War Service loans.

Interest collected totalled $162,617 while interest credited to Federal Revenue in respect of all monies outstanding was $148,697.

Profit and Loss.—The net profit earned by the Board during the year was $26,386.

Reserves.—The reserves of the Board at 31st December, 1936, stood at $837,886.

Capital.—The capital of the Board is $4,000,000 created by the Planters' Loans Fund Enactment (Cap. 131).

THE ESTATE DUTY OFFICE.

The total of estate duty collected throughout the Federated Malay States in 1936 was $406,310 as against $288,286 in 1935 and $367,902 in 1934. The large increase in revenue over that of 1935 is mostly due to the more systematic examination and investigation to which estates are now subjected.

There were 593 affidavits lodged during 1936 and of this number 103 were valued at $1,000 or under and were therefore certified as exempt from payment of estate duty. There was only one estate in which duty was assessed at over $50,000 during 1936, but that being assessed in December the duty will be collected during 1937.

Valuation of immovable properties continued to be a difficult problem during the year, but it is hoped that a more satisfactory system will be evolved during 1937.

The amount of revenue assessed and calculated but unpaid on 31st December, 1936, was $552,965.80 of which $100,000 has been collected during January, 1937.

Several cases of attempted evasion of duty were discovered during the year, the *modus operandi* of which was the transfering of immovable properties registered in the name of the deceased, by means of powers of attorney null and void by the death of the donor.

There were 124 investigation papers registered during 1936 against 40 in 1935 and the activity in this direction is having effect. There were 32 cases in which the death of a partner in a partnership was reported to the Collector under section 43 of the Estate Duty Enactment. Prior to 1936 there have been no cases reported under this section.

MILITARY.

After a tour of approximately 16 years in the country the 2nd Battalion, 20th Burma Rifles Regiment, stationed at Taiping, was replaced by the 1st Battalion, 2nd Punjab Regiment, on 16th February, 1936; and the latter thus renewed its acquaintance with Malaya which began in 1869 when the Battalion had its headquarters in Singapore.

The strength of the Battalion on the 31st December, 1936, was :

British officers	11
Indian officers	19
Indian other ranks	743

The expansion of the Malay Regiment towards its full strength proceeded rapidly during the year and the strength on the 31st December was 16 officers, 12 British Instructors and 560 Malay other ranks. A further enlistment is being made in April, 1937, which will bring the unit up to the authorised establishment of 734. The organisation is the same as in a British Battalion—3 Rifle Companies, 1 Support (M.G.) Company and H.Q. Wing.

In October, four Malay officers were granted High Commissioner's Commissions and were gazetted 2nd Lieutenants. These officers were formally presented with their swords by His Excellency on the occasion of the opening of the Federal Council at Kuala Lumpur on 4th November.

Three hundred and fifty men of the Battalion went under canvas in Selarang Park, Singapore, for a month on 13th January and benefited greatly from their experience and mixing with other troops.

VOLUNTEERING.

Satisfactory progress was made in the training of the Local Forces during 1936 and it is particularly gratifying to note that the increase in strength of the Malay States Volunteer Regiment reported last year has been more than maintained, the numbers having risen from 685 to 736. What is more important still is that the increase of prosperity in the country has been reflected in a marked increase in the number of volunteers who have been able to fulfil all their obligations and thus become qualified as efficient.

The Malayan Volunteer Infantry have also made satisfactory progress. Almost every unit is now up to full strength, and many have waiting lists, a very desirable position since it enables commanders to select only men whose physique and character can meet the demands of military training.

The satisfactory standard of weapon training which was reached last year has been well maintained, and there was a marked increase in the numbers of men trained in the handling of automatic weapons.

Though it is not possible for volunteers in the short time at their disposal for training to make themselves as generally efficient as the regular soldier, it must be borne in mind that the Local Forces will only be called upon to fight under the conditions prevailing in Malaya. By keeping this fact in sight and concentrating only on those aspects of war which are applicable to this country it should be possible to train them to a very satisfactory standard of efficiency. Moreover it is possible to arm and equip them with weapons and material particularly suited to their role in war. These points are continually kept in mind, and existing arms and material are modified on new patterns evolved with a view to increased efficiency.

MALAY ADMINISTRATIVE SERVICE.

In March, 1910, a scheme for the employment of Malays in the Public Service (Higher Subordinate Class) was introduced with the object of training boys of good family to fit them for high and responsible appointments in the Government service. The officers appointed under that scheme were styled Malay Assistants. Probationer Malay Assistants were selected from boys who had passed the 7th Standard at the Malay College, Kuala Kangsar. After selection they had to undergo a three-year course of study in the College and show proficiency in official correspondence, Treasury work and other prescribed subjects before being appointed as Malay Assistant, Grade III. On promotion to Grades II and I of the scheme Malay Assistants were eligible to serve as Settlement Officers and in other appointments of similar status. There was provision for a Special Class consisting of two Magisterial appointments, three appointments of Assistant District Officer, one of Malay Assistant and one of Assistant Conservator of Forests. The salary scale of the various grades, including the Special Class, was the same as that of the General Clerical Service in force at the time. The scheme also held out hope to officers in the Special Class of promotion to higher appointments in the Civil Service, thus envisaging the possibility of further development should the work and ability of officers on the scheme justify further advancement.

The outbreak of the Great War, making it necessary for Government to free as many of its European officers as possible for military duty, resulted in a considerable increase in the numbers of Malay Assistants appointed to higher and more responsible posts, and in 1917 it was decided to introduce a new scheme which opened to the Malay Officers a well-paid administrative career. The passing of the Cadets' Law Examination was introduced into this scheme as a condition for promotion to the Special Class.

The 1917 scheme was in turn superseded in 1921 by another scheme which provided that boys educated in English schools other than the Malay College, Kuala Kangsar, should be eligible to compete for 50 per cent. of the annual number of vacancies for probationerships. There were at the time of the introduction of this revised scheme in 1921 twelve Malay Officers who were performing the duties of Civil Service appointments or of additional appointments open to Cadets. The number of Malay Officers at end of 1921 was 50 and there were in addition 23 Probationers.

The Malay Administrative Service Scheme in its present form dates from 1930. Appointments as Probationers in the Malay Administrative Service are open to Malays who have passed the Cambridge School Certificate examination and are over 18 and under 20 years of age. In the case of candidates who have taken an honours degree at Oxford or Cambridge the age limit may be waived and they may be appointed on a salary higher than the initial salary prescribed under the scheme. Vacancies are filled by the Federal Secretary on the recommendation of a Selection Board, a minimum of 50 per cent. of the posts being reserved for boys from the Malay College, Kuala Kangsar. Successful candidates undergo a course of study in Law and General Orders at the Malay College, Kuala Kangsar, for a period of one year, and thereafter remain on probation for at least two years during which period they have to pass the examination in General Orders and Colonial Regulations set for Cadets of the Malayan Civil Service and also an oral examination on subjects connected with the actual work they have been doing. Thereupon they become Malay Officers, Class III, on a salary scale of **$150-A10-$170** per mensem. After serving for three years in this Class and provided they have passed the examination in Law prescribed for Cadets of the Malayan Civil Service, Malay Officers are promoted to Class II on a salary scale of **$200-A10-$300** per mensem. There are 22 appointments in Class II mainly consisting of Deputy Assistant District Officerships.

Malay Officers in Class II with not less than seven years' service become eligible for promotion to Class I. Promotion to Class I is not automatic or by seniority but depends on the occurrence of vacancies and is by selection according to merit and qualifications. There are 28 posts in this Class, the salary scale of which is **$330-A15-$420** per mensem. Officers in Class I are called upon to function as Assistant District Officers, Second Magistrates and in other appointments of a similar status and responsibility, many of which were formerly in the cadre of the Malayan Civil Service.

The declared policy of Government is that Malay Officers of the Malay Administrative Service who by reason of their character, ability and industry have shown their fitness should be promoted to the Malayan Civil Service. Officers of Class I of the Malay Administrative Service who have served in that Class for at least three years are eligible for promotion to the Malayan Civil Service for service in the Federated Malay States only: such promotions being made by selection according to merit and depending upon vacancies in the authorised cadre. At the end of the year under review 19 Malay Officers had been promoted to the Malayan Civil Service.

GENERAL.

The year under review was overshadowed by the death of His Majesty King George V. The news of His Majesty's death created a deep sense of sorrow among all communities which evidenced their great love and devotion to His Majesty's person and to the Throne. The same sentiments of loyalty were again demonstrated at the accession of His Majesty King Edward VIII and in December when, on his abdication, he was succeeded by His Majesty King George VI.

His late Majesty King George V was graciously pleased to confer the following honours at the New Year:

Companion of the Most Distinguished Order of St. Michael and St. George	Mr. Geoffrey Edmound Cator, British Resident, Perak
Commander of the Most Excellent Order of the British Empire (Civil Division)	Mr. Hallam Brookfield Egmont Hake
Officer of the Most Excellent Order of the British Empire (Civil Division)	Mrs. Mary Josephine Were, L.R.C.P., S.L., D.P.H., Lady Medical Officer, Infant Welfare Centre, Kuala Lumpur
The King's Police Medal (For Gallantry)	Lance-Corporal Mat Atin bin Malim Patani, Federated Malay States Police Force
Meritorious Service Medal of the Civil Division of the Order of the British Empire	Enche Mohamed Hashim bin Haji Talib, Head Malay Teacher, Sultan Idris Training College, Tanjong Malim
Medal of the Order of the British Empire (Military Division)	Sergeant Robert Paisley Whyte, Malay States Volunteer Regiment

and the following honours were conferred by His Majesty King Edward VIII on the occasion of his birthday:

Companion of the Most Distinguished Order of St. Michael and St. George	Mr. David Henry Elias, General Manager, Federated Malay States Railways, and Member of the Federal Council
Commander of the Most Excellent Order of the British Empire (Civil Division)	Mr. George Preston Bradney, late Auditor, Straits Settlements and Federated Malay States
Member of the Most Excellent Order of the British Empire (Military Division)	Lieutenant Douglas Foster Grierson, Perak Battalion, Federated Malay States Volunteer Force
Meritorious Service Medal of the Order of the British Empire	Sub-Inspector Sher Mohamed, Federated Malay States Police Force

The Certificate of Honour was awarded to Wan Abdul Jalil bin Wan Hussain, J.P., in recognition of his loyal and valuable services to the Government of the Federated Malay States.

His Highness the Sultan of Selangor was received in audience by His Majesty King Edward VIII on 27th October, 1936, when His Majesty appointed him to be an Honorary Knight Commander of the Royal Victorian Order.

Sir Thomas Comyn-Platt who was sent here by the Society for the Preservation of the Fauna of the Empire to make enquiries regarding fauna preservation in Malaya submitted his report to the Society in July, 1936, and the report was published towards the end of December. Meanwhile it was decided that on grounds of public policy the organisation and control of the Game Department in the Federated Malay States, which hitherto was administered by Mr. Theodore Hubback in an honorary capacity, should be placed on a regular and permanent basis, and accordingly Captain A. T. A. Ritchie, O.B.E., M.C., who had for 13 years been head of the Game Department in Kenya Colony was selected by the Secretary of State for the appointment of Chief Game Warden. Captain Ritchie arrived on the 10th January, 1937, and took over the duties of his appointment.

The Deputation appointed by the Government of India to examine the conditions of Indian labourers in Malaya arrived in the country in December, 1936. The Right Honourable Mr. V. S. Srinivasa Sastri, P.C., C.H., who was the delegate appointed, with Mr. G. S. Bozman, I.C.S., as adviser, submitted his report in February, 1937.

Mr. S. W. Nelson of the Ministry of Transport who was appointed as Chairman of the Transport Board arrived in the country in July, 1936, and was engaged, in addition to his duties as Chairman of the Board, in assisting in the preparation of a draft Bill to consolidate and revise the existing law relating to the various forms of road transport. This Bill, entitled the Road Traffic Bill, was passed by the Federal Council on 29th June, 1937.

As already stated in the report for 1935 the post of Federal Secretary was substituted for that of Chief Secretary to Government on the 24th February, 1936. The further steps taken towards decentralisation during the year under review were the passing of the necessary legislation and the changes effected in the General Orders to provide for the execution of the statutory and administrative powers which were attached to the office of Chief Secretary. The changes made during the year in the statutory powers were only as a temporary measure and consisted in the transference of the powers to the High Commissioner by the Chief Secretary (Devolution of Powers) Enactment which was passed in February, 1936. Meanwhile, two committees were appointed, one to advise on the distribution of the statutory powers vested in the Chief Secretary to Government by State Enactments, and the other to make similar recommendations in respect of Federal Enactments. The committees finished their labours towards the end of the year: their reports have since been approved by the Secretary of State, and the consequent legislation—entitled the Statute Law Revision (Chief Secretary's Powers) Enactment—was passed by the Federal Council on 29th June, 1937.

The financial position of the country during the year under review was sound and the recovery of 1935 has been more than maintained. Although this shows a satisfactory state of affairs, it should be stressed that this is mainly due to the restriction of output of the two most important industries of the country, and that all proposals for expenditure—especially recurrent expenditure—must continue to be most carefully scrutinized.

Mr. A. S. Small, C.M.G., M.C.S., Colonial Secretary, Straits Settlements, administered the Government of the Straits Settlements and officiated as High Commissioner for the Malay States during the absence on leave of His Excellency Sir Thomas Shenton Whitelegge Thomas, G.C.M.G., O.B.E., from the 26th April to the 3rd September, 1936.

Mr. C. D. Ahearne, M.C.S., continued in the office of Federal Secretary from the date of the creation of the appointment in February, 1936, throughout the rest of the year.

H. FRASER,
Acting Federal Secretary, F.M.S.

Kuala Lumpur,
21st August, 1937.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801: that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888	23,720	1,395,923	2,790,451	9,469,446	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,686	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	14,000,633	118,590	8,667,274	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,583,799	160,213	11,192,715	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,180	17,704,014	127,593	8,575,863	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,037,720	174,490	3,712,752	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584‡	84,660,975¶	201,393,405	349,012,595	67,042	15,420,646	261,352	4,313,743	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870‡	82,470,192¶	168,020,418	213,652,044	62,065	9,121,971	249,675	1,084,440	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659‡	62,163,328¶	106,201,211	125,177,183	51,250*	5,501,733	243,886	543,778	4,832,700	12,912,579	1,723,117§	1931
1932	43,817,151‡	53,740,139¶	71,133,301	87,851,281	27,091*	3,594,022	235,898	376,380	4,268,125	9,483,859	1,770,486	1932
1933	47,198,806‡	50,258,671¶	67,129,150	111,885,935	22,824*	4,886,683	248,356	577,406	3,989,363	9,036,776	1,597,770	1933
1934	58,926,323‡	47,211,228¶	84,731,059	202,725,341	36,385	8,886,234	256,516	2,160,157	5,141,756	11,284,147	1,631,728	1934
1935	62,364,264‡	51,119,943¶	87,102,149	186,770,827	40,748	9,700,616	194,478	2,247,497	5,593,334	11,871,097	1,777,421	1935
1936	68,090,902‡	52,702,228¶	96,796,795	246,945,491	64,719	13,410,254	182,873	2,817,180	5,804,247	13,086,733	1,847,951	1936

‖ Excluding bullion and specie. § *Vide* foot-note on page 151. † The figures for previous years included items now omitted owing to reclassification of revenue. ‡ Exclusive of Railway receipts. ¶ Exclusive of Railway expenditure. * The tonnage for the years 1931, 1932 and 1933 was based on 72% tin content of ore and not on the true assay value, viz., 75.5%.

APPENDIX B.

F.M.S. 3 PER CENT. STERLING LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1936.

Dr.	$ c.	$ c.		$ c. Cr.
To Redemption of 4½ per cent. S.S. Sterling Loan 1935-45—			By Loan Subscription— 3 per cent. 1960-70 issued in June, 1935	34,285,714 29
Total Loan raised	36,000,000 00			
Less Redemption from Revenue Account	1,714,285 71	34,285,714 29		
		34,285,714 29		34,285,714 29

APPENDIX C.

F.M.S. 4½ PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1936.

Dr.	$ c.	$ c.		$ c. Cr.
To Loan Expenses—			By Loan Subscription— 4½ per cent. issued at 98 in May, 1931	16,000,000 00
(*a*) Discount on Issue Price ...	320,000 00			
(*b*) Commission and Charges ...	40,000 00	360,000 00		
To Loan Works...	...	12,003,297 51		
To Balance	...	3,636,702 49		
		16,000,000 00		16,000,000 00

APPENDIX D.

F.M.S. 3 PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1936.

Dr.	$	c.	$	c.		$	c.
To Loan Expenses—					By Loan Subscription—		
(*a*) Advertisement	600	20			3 per cent. 1956-66 issued in July, 1936	15,000,000	00
(*b*) Commission and Charges ...	37,500	00	38,100	20			
To Transfer to the Supplementary Sinking Funds for the Redemption of the Straits Settlements 6 per cent. Sterling Loan 1936-51	...		14,961,899	80			
			15,000,000	00		15,000,000	00

APPENDIX E.

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

	Cost.	Where obtainable.
	$ c.	
Census Report, British Malaya, 1931	5 00	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Handbook to British Malaya	1 00	Malayan Information Agency, 57, Charing Cross, London.
The Oil Palm in Malaya	2 00	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
An Outline of Malayan Agriculture	3 00	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 60	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Treaties and Engagements affecting the Malay States and Borneo	3 50	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Geology of Malayan Ore Deposits	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Geology of Malaya	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free	Malayan Information Agency, 57, Charing Cross, London.

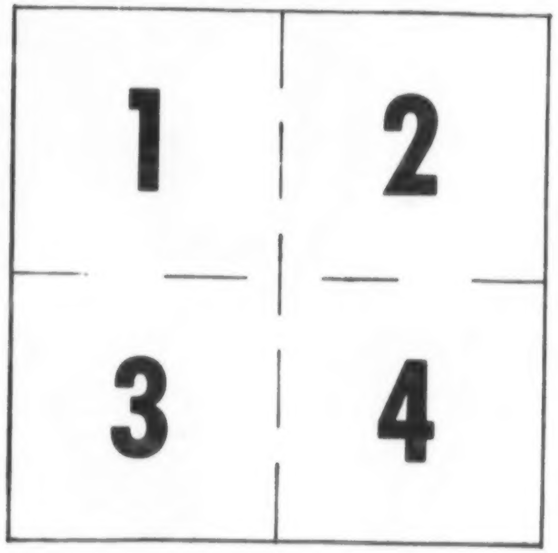
Appendix E—(*cont.*)

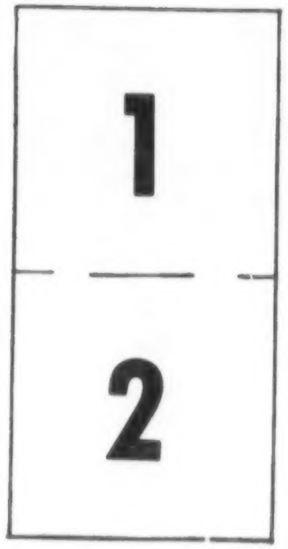
LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES—(*cont.*).

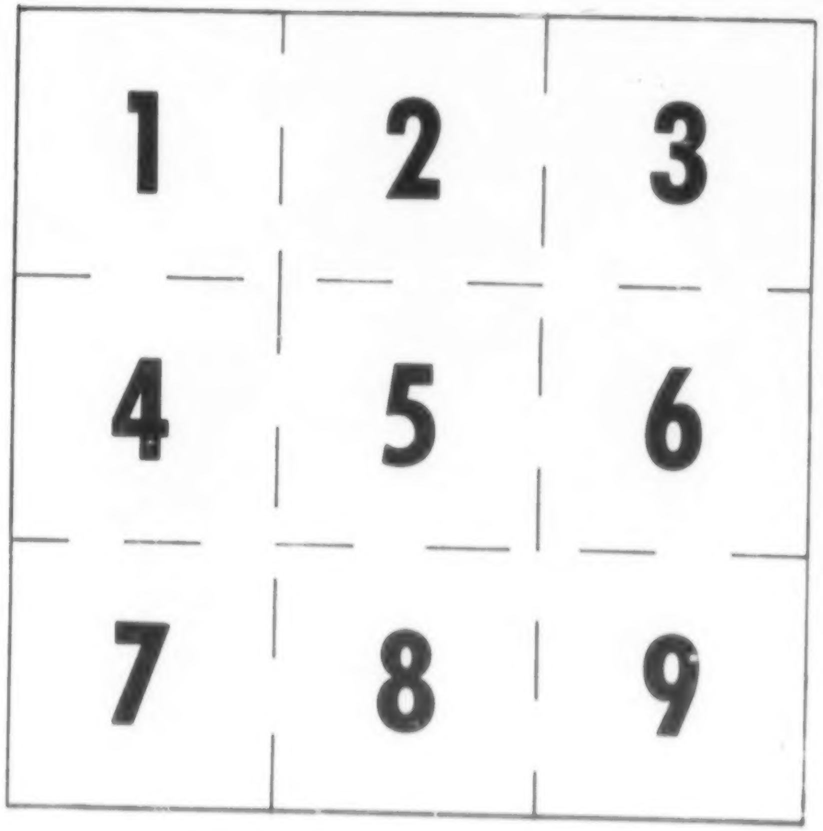
	Cost. $ c.	Where obtainable.
Fisheries of British Malaya ...	5 00 ...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Commercial Timber Trees of the Malay Peninsula	5 00 ...	Adviser on Forestry, Malay States, Kuala Lumpur.
Report on the Wild Life Commission (Three volumes) ...	12 00 ...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Malayan Year Book	1 50 ...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Rubber Statistics Handbook ...	1 50 ...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Schedule of Import, Export and Excise Duties, Malaya ...	50 ...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Mui Tsai in Hong Kong and Malaya, Report of Commission	2 50 ...	Messrs. Kelly and Walsh, Ltd., Singapore.

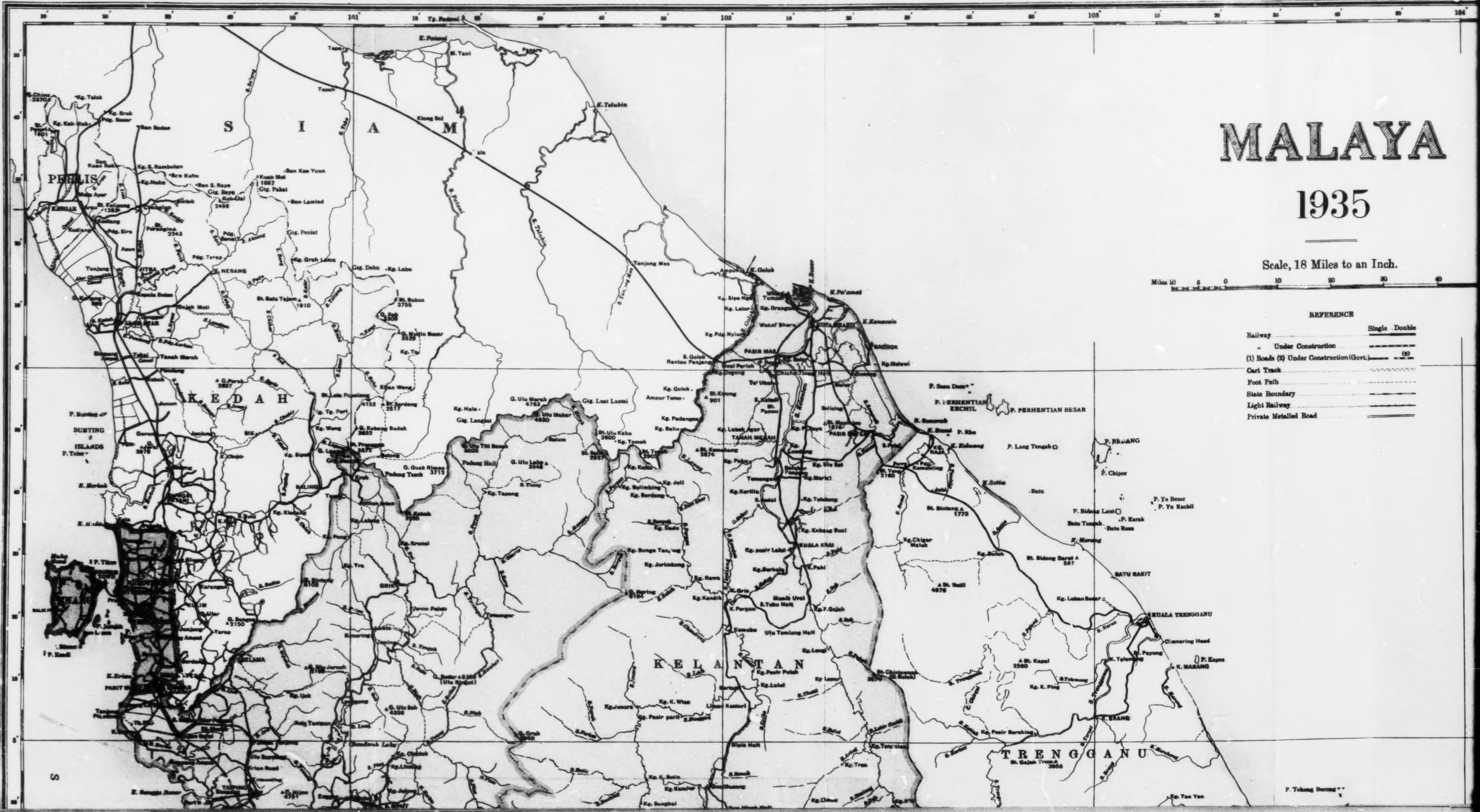
Federated Malay States Government Press.

Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.







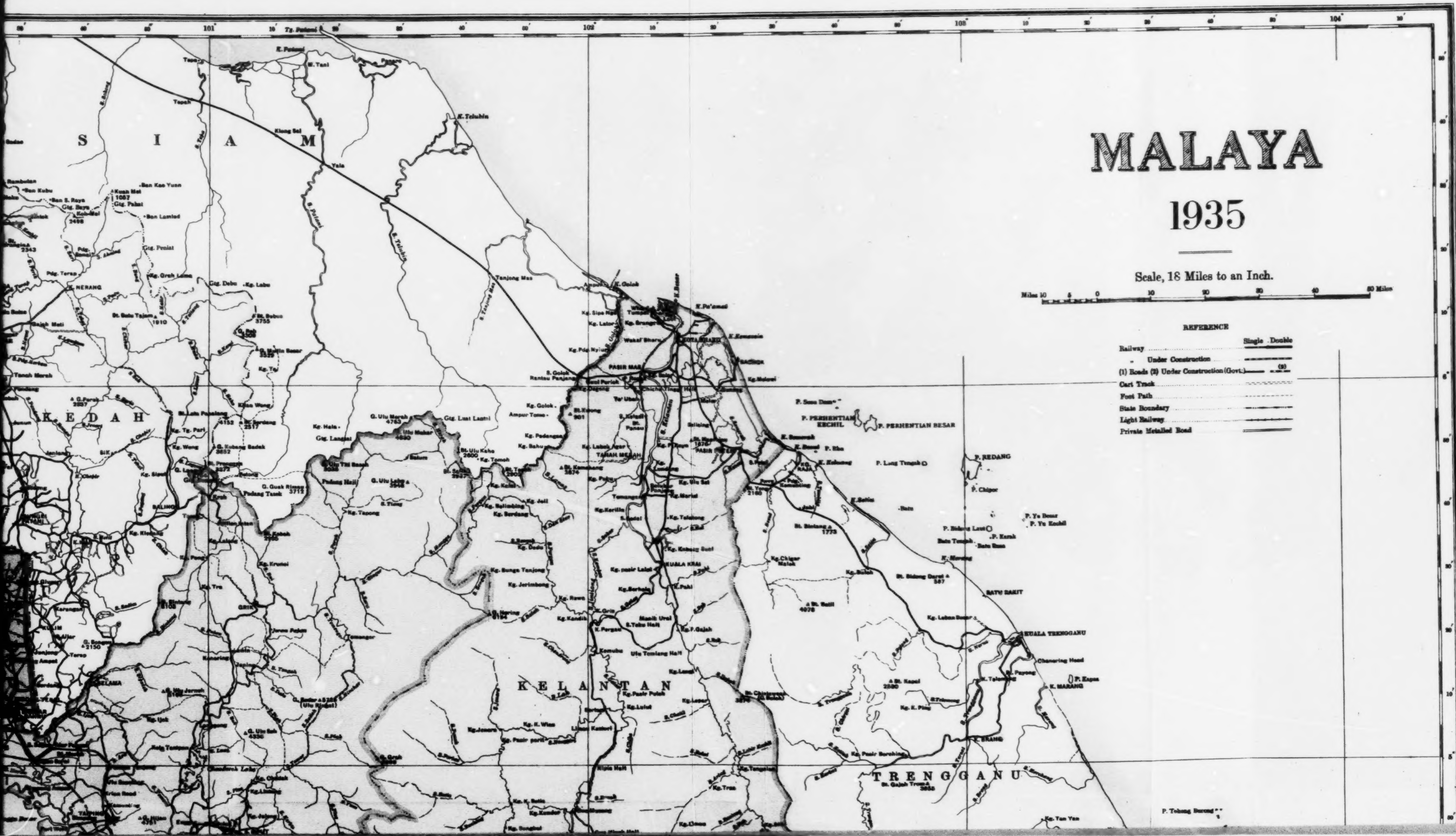


MALAYA

1935

Scale, 18 Miles to an Inch.

Miles 10 5 0 10 20 30 40
REFERENCE
Single Double
Railway
" Under Construction
(1) Roads (2) Under Construction (Govt.) (2)
Cart Track
Foot Path
State Boundary
Light Railway
Private Metalled Road
S I A M
PERLIS
K E D A H
K E L A N T A N
T R E N G G A N U
PENANG
BUNTING ISLANDS
KUALA KRAI
PASIR MAS
TANAH MERAH
KUALA TRENGGANU
K. MARANG
BATU RAKIT
P. PERHENTIAN BESAR
P. PERHENTIAN KECHIL
P. Lang Tengah
P. REDANG
P. Chipor
P. Kapas
Tg. Patani
K. Patani
K. Telubin
S. Telubin
S. Patani
K. NERANG
K. Golok
K. Kemasin
Tanjong Mas
TAIPING
101°
102°
103°
104°

MALAYA
1935
Scale, 18 Miles to an Inch.
Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Single Double
Railway
Under Construction
(1) Roads (2) Under Construction (Govt.)
Cart Track
Foot Path
State Boundary
Light Railway
Private Metalled Road
101°
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S I A M
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T R E N G G A N U
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K. Patani
Yala
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K. Telubin
Tanjong Mas
K. Golok
K. Besar
K. Pa'amat
KOTA BHARU
PASIR MAS
Rantau Panjang
TANAH MERAH
PASIR PUTEH
Tumpat
NERANG
BALING
GRIK
KUALA KRAI
Manik Urai
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P. Bidong Laut
P. Karah
BATU RAKIT
KUALA TRENGGANU
Chenering Head
P. Kapas
K. MARANG
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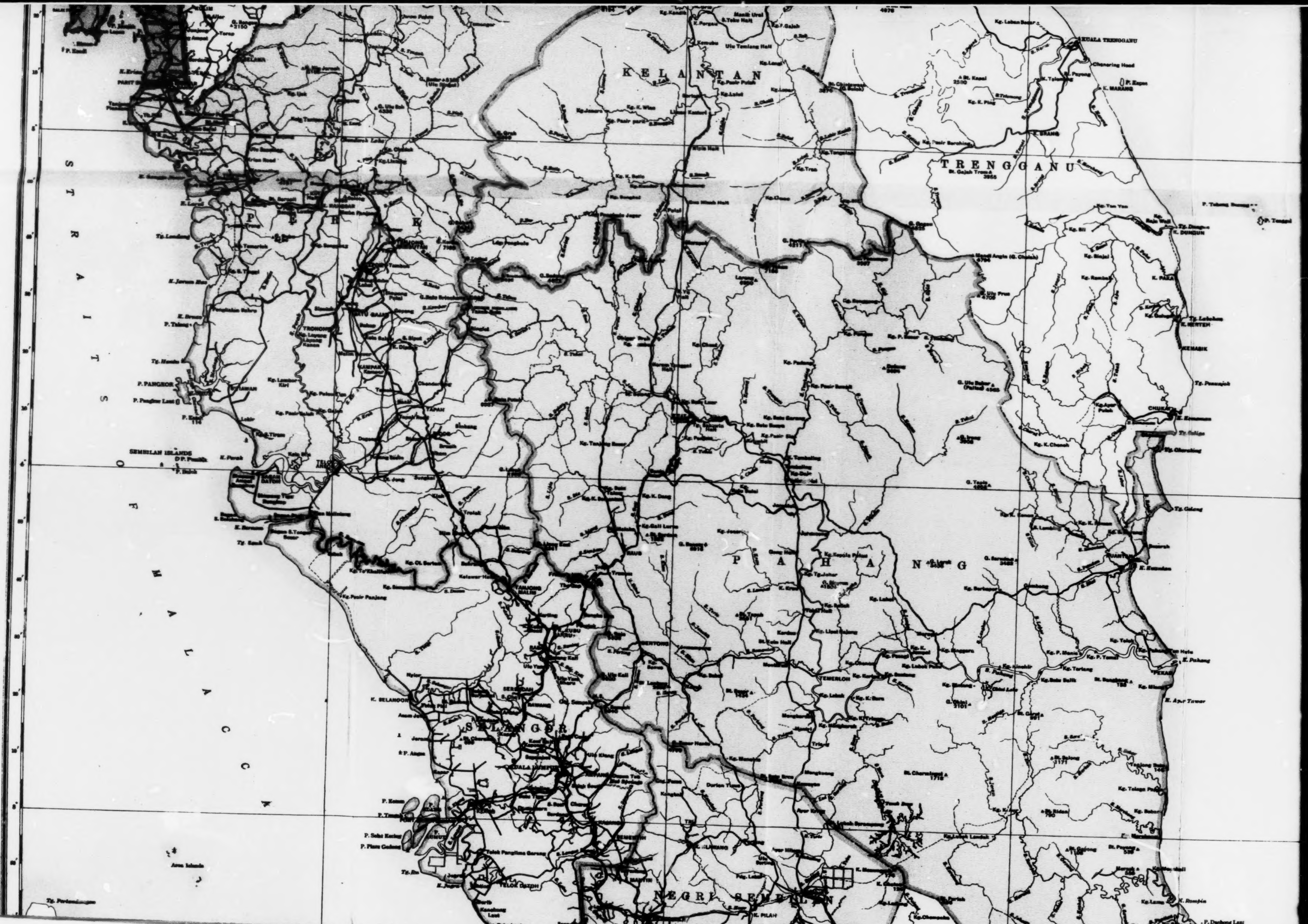
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STRAITS OF MALACCA
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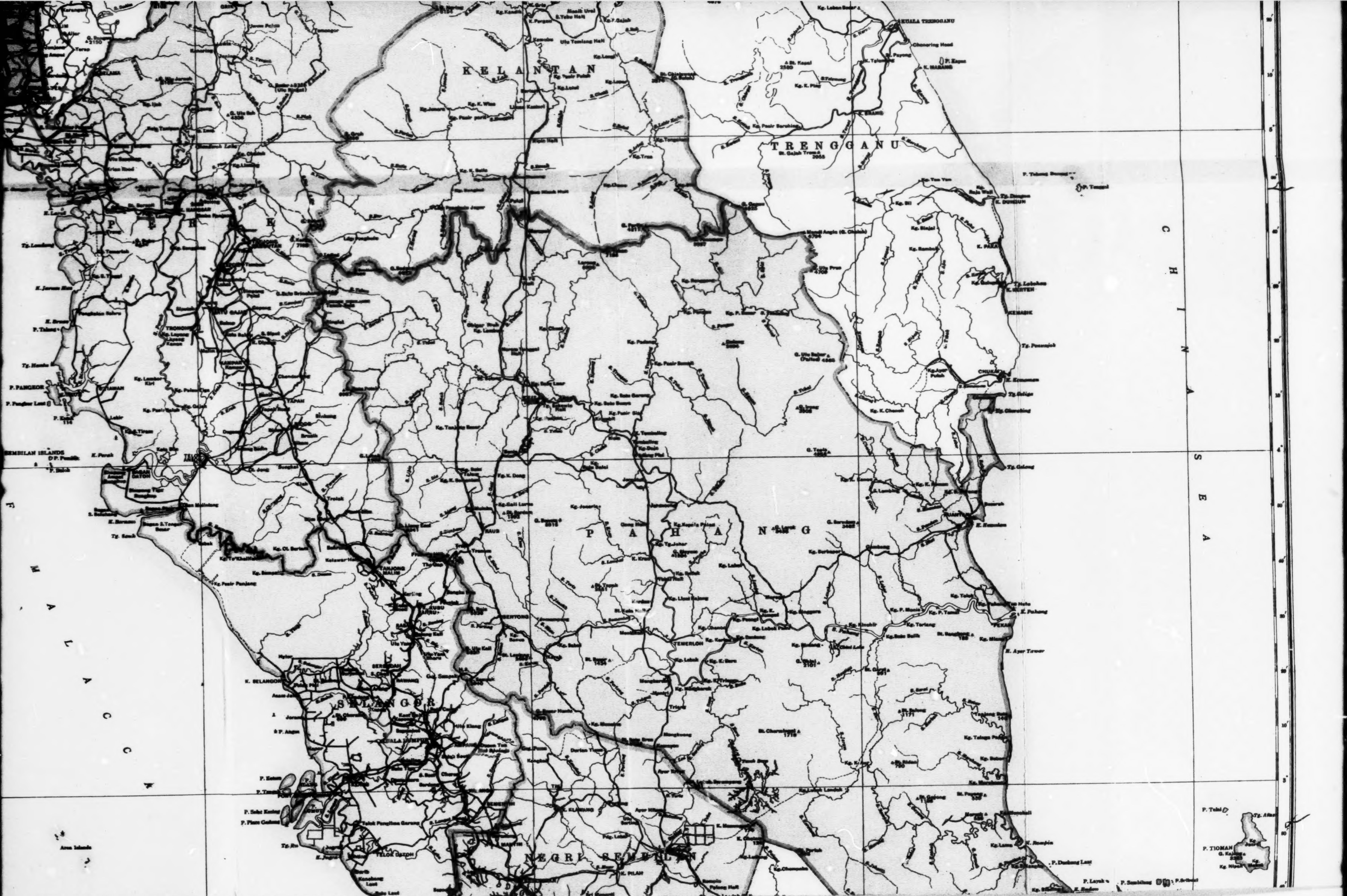
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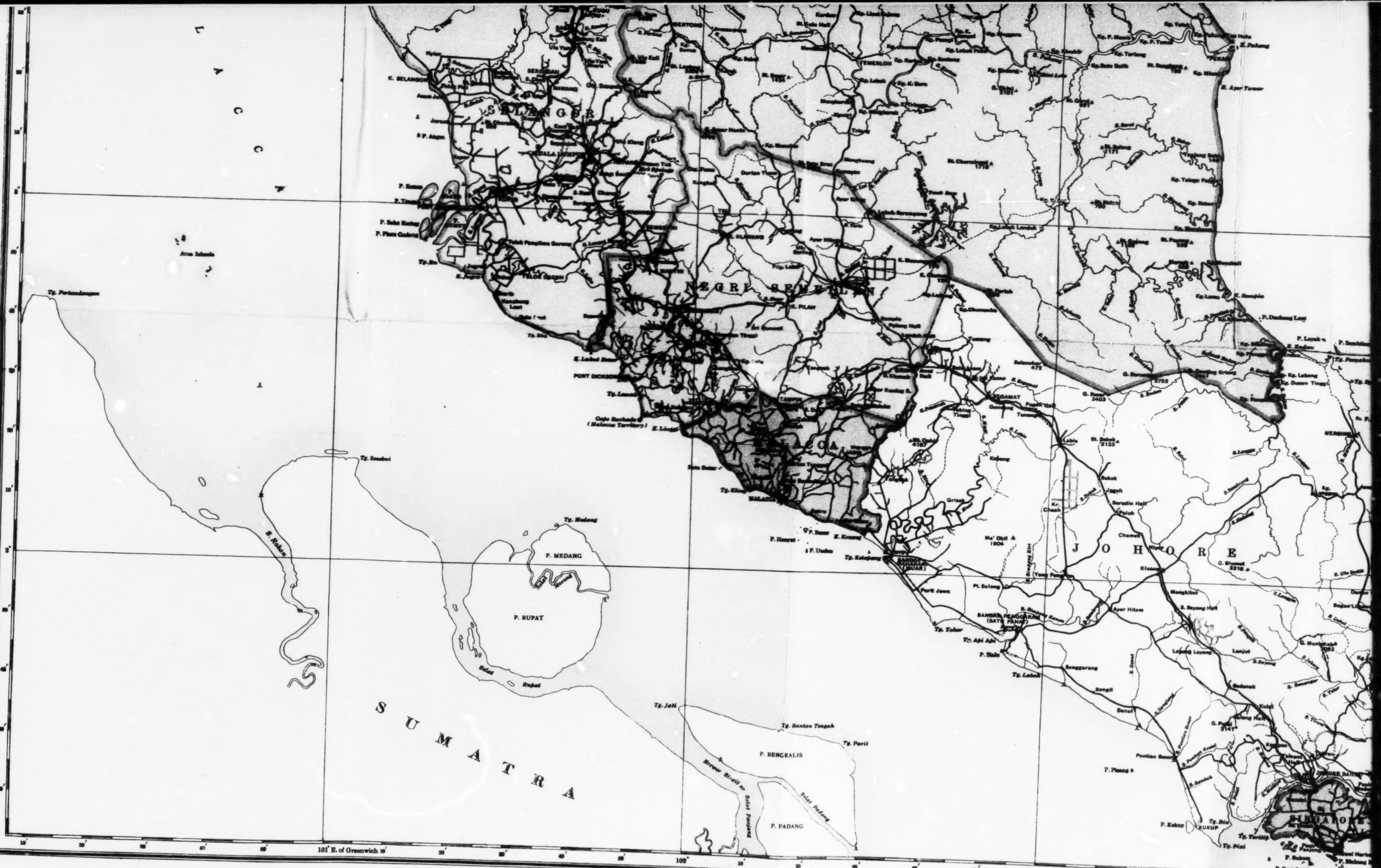

L A C C A
SELANGOR
NEGRI SEMBILAN
MALACCA
J O H O R E
SINGAPORE
S U M A T R A
PORT DICKSON
TEMERLOH
SEGAMAT
BANDAR MAHARANI (MUAR)
BANDAR PENGGARAM (BATU PAHAT)
KUKUP
P. MEDANG
P. RUPAT
P. BENGKALIS
P. PADANG
Tg. Medang
Tg. Jati
Tg. Bantan Tengah
Tg. Parit
Selat Rupat
Brewer Strait or Selat Panjang
Selat Padang
S. Rokan
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Cape Rachado (Malacca Territory)
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Ma' Okil 1906
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Ayer Hitam
Parit Jawa
Pt. Sulong
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Kluang
Senggarang
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Benut
Pontian Besar
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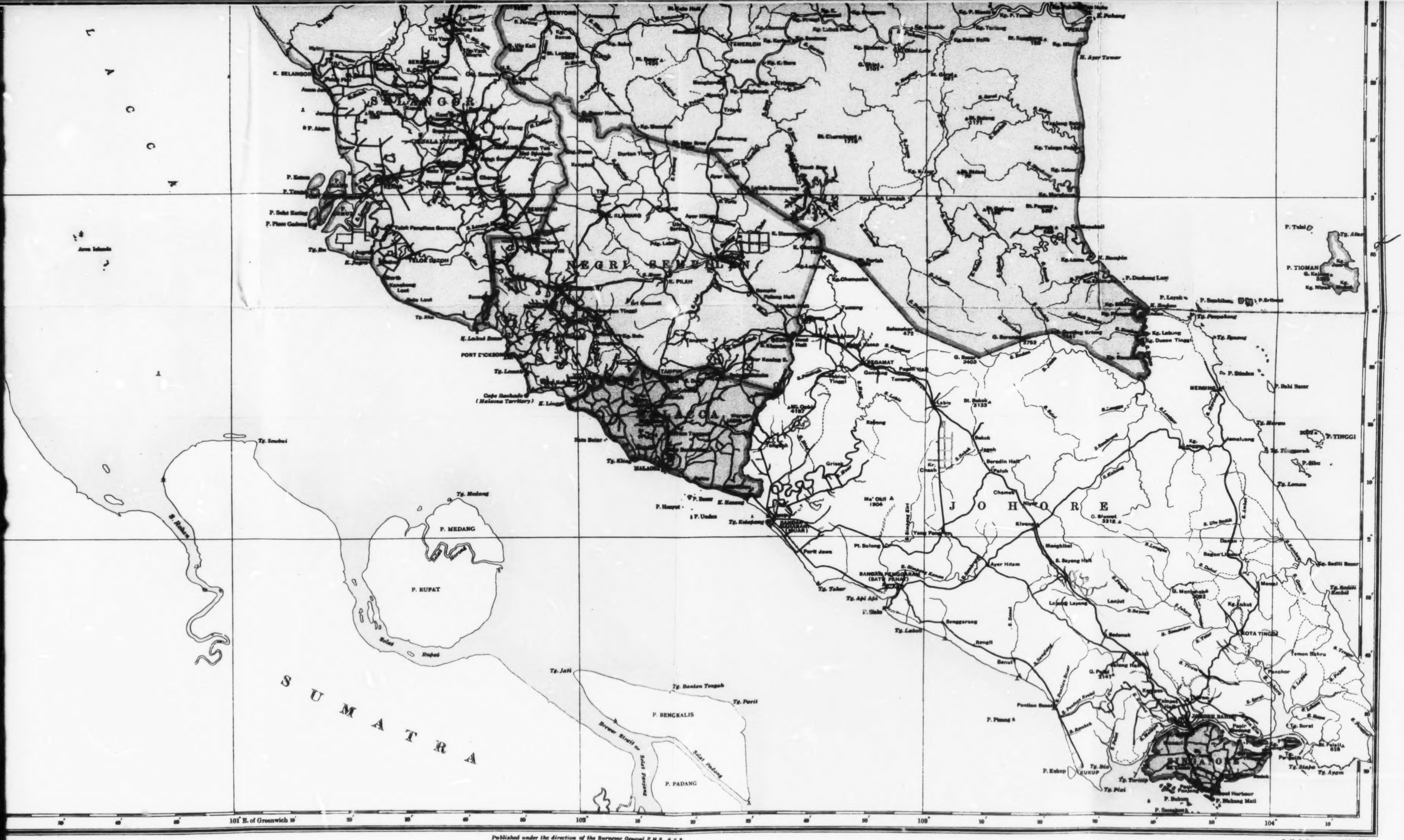
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K. SELANGOR
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(Malacca Territory)
MALACCA
TAMPIN
SEGAMAT
J O H O R E
BANDAR MAHARANI (MUAR)
BANDAR PENGGARAM (BATU PAHAT)
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SINGAPORE
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F.M.S. 4½ PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1937.

F.M.S. 3 PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1937.

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

GLOSSARY.

Amang = a black mineral substance found in company with tin-ore and consisting mainly of ilmenite

Atap = thatch usually made from the leaves of the nipah palm

Batek = the process of painting on fabrics with wax

Bendang = padi growing area

Blachan = shrimp paste

Damar = Resin

Dulang = round wooden tray used for "washing" tin or gold

Gantang = a measure of capacity approximately equal to a gallon

Getah = rubber

Gula = sugar

Ikan = fish

Jelutong = the produce of a large indigenous tree used principally for manufacture of chewing gum (*dyera costulata*)

Kachang = a generic name for beans

Kampong = village

Kathi = Registrar of Marriage and Divorce

Madrasah = religious school in connection with a mosque

Mengkuang = screw-pine

Mukim = sub-division of a district

Nipah = a trunkless palm growing in swamp ground

Padi = rice in the husk

Parit = (in this context) a canal cut by the Irrigation Department for drainage purposes

Penghulu = a headman

Picul = 133⅓ lbs.

Ra'ayat = peasant

Rembia = sago-palm

Sakai = aboriginal tribes of the Malay Peninsula

Tali Ayer = a channel or canal cut for conveying water for drainage purposes

FEDERATED MALAY STATES.

REPORT OF THE FEDERAL SECRETARY TO GOVERNMENT FOR THE YEAR 1937.

CHAPTER I.

Geography, including Climate and History.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,980 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom".

By an Act of Parliament which received the Royal Assent on the 16th November, 1934, the territory of the Dindings was restored to Perak and has formed part of the State since the middle of February, 1935. The present Ruler of the State is His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., ibni Al Marhum Al Sultan Idris.

SELANGOR.

Selangor (3,160 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., K.C.V.O., died on the 31st March, 1938, and is succeeded by his son His Highness Sultan Alam Shah, K.C.M.G.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,580 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungei Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government, and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungei Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Tuanku Abdulrahman, K.C.M.G., ibni Al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 13,820 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Frederick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, K.C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15°F. at coastal stations and between 15° and 20°F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December, followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 232 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 109 inches and Cameron Highlands 106 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtainable at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 53°F, and at Tanah Rata 36°F. or only 4°F above freezing.

CHAPTER II.

Government.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

The State Council of Negri Sembilan comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undang, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undang for amendment or confirmation, and assent is finally given by His Highness and the Undang. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer styled Resident-General (a title later altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements who became ex officio the High Commissioner for the Malay States. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected.

In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State.

In 1927 the Federal Council was reconstituted and the Rulers withdrew from active participation in the deliberations of the Council; and the Council was enlarged by the addition of a number of official and unofficial members.

In 1936, as a further step towards decentralisation, the post of Chief Secretary to Government was abolished and the post of Federal Secretary was substituted, ranking as a Class IA appointment in the Malayan Civil Service. The office carries a seat on the Federal Council and in precedence comes next after the Residents. The duties of the post in purely Federal matters comprise all those which ordinarily appertain to an office of Chief or Colonial Secretary. In matters appertaining purely to the States he is the channel of communication between the States and the High Commissioner. This change was effected on the 24th February, 1936.

The Federal Council consisted in 1937 of the High Commissioner as President; the four British Residents; the Federal Secretary; the Legal Adviser; the Financial Secretary; the Adviser on Medical Services; the Controller of Labour; the General Manager for Railways; the Adviser on Education; the Commissioner of Customs and Excise; the Secretary for Chinese Affairs; the Adviser on Agriculture; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. Certain laws relating to departments, which under the decentralisation policy have been transferred to State control, though affecting more than one State are however passed by the State Councils. The Federal Council retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

LOCAL GOVERNMENT.

For the purposes of local Government the Federated Malay States are divided into 25 districts in each of which there is a Sanitary Board, a Licensing Board, and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The population of the Federated Malay States on 30th June, 1937, was estimated to be 1,961,397, an increase of 113,466 over the figure for 1936. This estimate was based on the 1931 Census, brought up to date by including the difference between births and deaths and immigration and emigration. The increase of 113,466 over last year is made up of 33,844 on account of balance of births over deaths and the remainder from immigration.

The balance of immigration over emigration accounted for an increase of 79,622 compared with the figure of 35,000 in 1936.

The estimated population, by States, is tabulated below:

ESTIMATED POPULATION—MID-YEAR 1937.

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.	Total.
Perak	307,245	376,950	185,515	3,361	6,561	879,632
Selangor	138,939	282,832	181,637	4,008	10,120	617,536
Negri Sembilan ...	97,601	106,061	56,680	1,177	3,223	264,742
Pahang	120,334	60,784	16,437	523	1,409	199,487
Total ...	664,119	826,627	440,269	9,069	21,313	1,961,397

The sex ratio for the Federated Malay States as a whole was 141 males to 100 females. The influx of female immigrants from China has reduced the Chinese ratio to 153 males to 100 females, compared with 162 to 100 females in the previous year.

The estimated population at the end of 1937 was 2,052,729.

BIRTHS.

The number of births increased during the year under review by 2,692 or 3.8 per cent. over those in 1936.

The number was 74,196 which represents a birth-rate of 37.8 per mille, a decrease of .9 per mille from 1936 but an increase from 35.9 per mille in 1935. The decreased rate was evident for all races except the Chinese.

The ratio of male to female births was 110 to 100 represented by 38,856 males and 35,340 females, compared with 111 to 100 females in 1936.

DEATHS.

The number of deaths recorded during the year was 39,031, an increase of 3,508 over the figure for 1936. The crude death-rate was 19.9 per mille which is the same as for 1935 but higher by .7 per mille than the rate for 1936.

The death-rate shows an improvement for Malays whereas for Chinese and Indians the rate has increased particularly in Negri Sembilan where the rate for Indians increased from 20.9 per mille to 25.2 per mille representing 1,074 deaths in 1936 and 1,431 in 1937.

The Registrar-General draws attention to the sex distribution of deaths at various ages. During early childhood the rate shows the normal proportion with a heavier mortality for males, but from 15-34 years the female deaths in Indians and Malays are proportionately very high. The explanation for this would appear to be a low standard of nutrition, and lack of proper attention during pregnancy and child birth.

It is gratifying however to be able to record a decrease in the maternal death-rate to 9.0 per thousand births for the whole of the Federated Malay States compared with 10.1 per thousand births in the previous year.

The rate for Chinese remained fairly constant being 4.8 this year as compared with 4.9 in 1936, while for Malays it has fallen to 11.1 per thousand births from 13.2 in the previous year. The rate for Indians showed a slight increase to 15.2 from 14.9 in the previous year.

INFANT MORTALITY.

Infant mortality increased slightly from 142 per mille in the previous year to 147 in 1937.

The rate for Malays and Chinese has varied only to a minor degree but for Indians it has increased from 126 per mille to 169, the highest recorded for some years.

This rise is present in every State but most marked in Negri Sembilan where it is 195 per mille, a rise of 47 over the previous year.

The lowest rate, as in 1936, was for Chinese in the State of Perak, at 121 per mille and the next for Malays in the State of Selangor at 133 per mille.

The most important conclusion to be drawn from these figures seems to be that, while the various health services are effecting a gradual improvement amongst the Malays and Chinese, they are not affecting Indians to the same extent. There is need for more attention to the health of Indian women and children.

TABLE I.

BIRTH-RATE IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1928-1937, PER MILLE.

Year.	Malays.	Chinese.	Indians.	All races.
1928	37.4	34.5	24.5	32.5
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	31.9	35.0	34.0
1933	39.3	33.1	34.6	35.5
1934	37.8	35.1	33.2	45.4
1935	37.5	37.4	32.1	35.9
1936	43.4	38.5	33.3	38.7
1937	40.2	40.0	31.8	37.8

TABLE II.

SUMMARY OF BIRTH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1937.

State.	No. of births.	Malays.	Chinese.	Indians.	Others.	All races.
Perak	32,704	40.6	38.4	30.2	18.0	37.2
Selangor	23,779	42.3	41.8	32.6	11.5	38.5
Negri Sembilan	10,205	42.6	37.8	33.9	27.5	38.5
Pahang	7,508	34.9	45.5	33.0	1.6	37.6
F.M.S.	74,196	40.2	40.0	31.8	15.3	37.8

TABLE III.

DEATH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1928-1937, PER MILLE.

Year.	Malays.	Chinese.	Indians.	All races.
1928	24.4	30.6	30.2	28.0
1929	21.8	29.6	23.4	24.6
1930	20.4	30.4	21.8	24.1
1931	18.8	18.9	20.5	19.1
1932	19.1	18.3	18.9	18.5
1933	22.0	19.3	19.7	20.2
1934	23.7	20.9	19.7	21.4
1935	21.0	19.8	19.5	19.9
1936	21.5	18.5	18.0	19.2
1937	21.1	19.2	20.4	19.9

TABLE IV.

SUMMARY OF DEATH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1937 AND 1936.

State.	Malays.		Chinese.		Indians.		All races.	
	1937.	1936.	1937.	1936.	1937.	1936.	1937.	1936.
Perak	21.1	23.4	18.5	18.1	20.3	18.7	19.7	20.0
Selangor	19.5	19.3	19.9	18.8	18.3	15.7	18.9	17.7
Negri Sembilan	21.6	20.8	17.7	17.3	25.2	20.9	20.6	19.1
Pahang	22.5	19.6	23.0	21.6	27.5	23.9	22.9	20.4
F.M.S.	21.1	21.5	19.2	18.5	20.4	18.0	19.9	19.2

TABLE V.

SUMMARY OF DEATHS FROM ALL CAUSES AT THE DIFFERENT AGES IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1937.

State.	AGE GROUPS.								Grand total.
	Under 1 year.	1-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	
Perak	4,590	2,642	743	738	1,376	1,510	1,553	4,160	17,312
Selangor	3,472	1,775	479	376	953	1,102	1,027	2,511	11,695
Negri Sembilan	1,672	855	179	191	460	555	516	1,051	5,465
Pahang	1,166	680	237	186	315	502	453	1,020	4,559
Total	10,900	5,952	1,638	1,491	3,104	3,669	3,549	8,728	39,031

TABLE VI.

SUMMARY OF INFANT MORTALITY RATES IN THE FEDERATED MALAY STATES ACCORDING TO STATES AND RACES FOR THE YEAR 1937, PER THOUSAND BIRTHS.

State.	All nationalities.		Malays.	Chinese.	Indians.
	Infant deaths.	Infant mortality rates.			
Perak ...	4,590	140	150	121	173
Selangor ...	3,472	146	133	149	156
N. Sembilan	1,672	164	158	159	195
Pahang ...	1,166	155	158	148	172
F.M.S. ...	10,900	147	149	138	169

CHAPTER IV.

Health.

There were no epidemics of major importance during the year but the number of deaths increased by 3,503 or 9.9 per cent. over the figure for 1936.

The hospital admissions again showed an increase which has been progressive since 1934 as shown by the table:

1933	76,297
1934	75,916
1935	92,276
1936	98,551
1937	115,898

The infantile mortality rate which may be accepted as a sensitive index of the general health conditions increased to 147 per mille which is higher than the two previous years when it was 142 and 144 per mille respectively, but still shows an improvement over 1934 when this rate rose to 163 per mille.

The death rate was also higher than in 1936 by .7 per cent. and was 19.9 per cent. which is exactly the same as in 1935, but taking the death rate and infant mortality rates as a criterion the general health of the community has fallen off to a slight degree.

SUMMARY OF PRINCIPAL CAUSES OF DEATHS IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1937.

State.	CAUSES OF DEATHS.												
	Malaria fever definitely diagnosed.	Enteric fever.	Dysentery.	Small-pox.	Diphtheria.	Cholera.	Plague.	Cerebro-spinal fever.	Tetanus.	Tropical typhus.	Influenza.	Probable malaria and fever unspecified.	Tuberculosis of respiratory system.
Perak ...	427	45	149	...	26	...	...	7	103	1	33	6,648	584
Selangor ...	256	15	170	...	30	...	...	3	143	8	59	2,801	462
N. Sembilan ...	248	6	85	.	7	...	...	...	19	3	14	1,741	211
Pahang ...	213	9	30	...	9	...	...	...	10	3	7	1,840	179
Total ...	1,144	75	434	...	72	...	...	10	275	15	113	13,030	1,436

State.	CAUSES OF DEATHS.											
	Other forms of tuberculosis.	Syphilis.	Ankylostomiasis.	Cancer.	Beri-beri.	Diseases of the heart.	Other diseases of circulatory system.	Bronchitis.	Pneumonia (all forms).	Other diseases of respiratory system.	Diarrhoea and enteritis.	Other diseases of digestive system.
Perak	58	46	22	105	52	328	66	169	1,214	198	536	377
Selangor ...	31	38	20	89	131	214	321	395	1,205	99	686	313
N. Sembilan ...	10	13	3	18	49	43	80	203	487	19	329	72
Pahang ...	4	12	27	16	56	17	32	74	231	176	104	132
Total ...	103	109	72	228	288	602	499	841	3,137	492	1,655	894

State.	CAUSES OF DEATHS.									
	Convulsions.	Diseases of nervous system and sense organs.	Non-venereal diseases of genito-urinary system.	Diseases of pregnancy, child-birth and puerperal state.	Premature birth and diseases of early infancy.	Old age or senility.	Violence (all forms).	Leprosy.	Other causes.	Total.
Perak	2,134	212	149	323	538	1,196	377	3	1,186	17,312
Selangor ...	1,555	130	185	203	651	930	350	12	190	11,695
N. Sembilan ...	706	73	66	81	251	292	103	1	232	5,465
Pahang ...	428	26	17	62	158	210	92	1	384	4,559
Total ...	4,823	441	417	669	1,598	2,628	922	17	1,992	39,031

PREVAILING DISEASES.

Malaria.—The number of cases of malaria admitted to Government hospitals increased from 20,344 in 1936 to 24,776 in the period under review. All these cases were accurately diagnosed and can be taken as a reliable indication of the prevalence of the disease.

Anti-malarial measures were maintained throughout all States and it is evident that, to effect an improvement, they should be intensified.

The increased immigration during the year may probably be the cause, to some extent, of the increase.

Dysentery, Diarrhœa and Enteritis.—The general decline in the general health of the populace is again evident as this group of diseases caused 1,783 deaths compared with 1,696 in the previous year.

Pneumonia.—The deaths due to pneumonia numbered 3,137, an increase of 867 over the figure 2,270 in 1936. This shows a progressive increase as the figures for 1935 and 1934 were 2,219 and 1,793 deaths respectively.

Tuberculosis.—Tuberculosis in its various forms was responsible for 1,413 deaths during the period under review which is a small decrease on the number in the previous year when there were 1,488 deaths, and the numbers for the previous years were 1,441, 1,394 and 1,409 respectively.

Leprosy.—The number of lepers at the beginning of the year again showed an increase being 1,830 compared with 1,593 at the beginning of the previous year and again during the year the number increased and was 1,937 at the end of the year.

The number of patients discharged was 134, compared with 50 in 1936. These patients were all bacteriologically negative and free from active lesions.

Leper Asylum, Kuala Lumpur.—The inmates in this asylum are all incurable opium smokers in addition to being incurable and chronic lepers.

No new admissions have been made to this settlement since 1931 and the numbers are gradually decreasing and at the end of the year were 183, a decrease of 17 during the year.

Venereal Diseases.—The progressive decrease in the number of patients for venereal diseases which has been unbroken since 1929, as shown in the table below, did not continue and the number increased to 18,996.

Year.	Total cases treated.
1929	40,802
1930	35,734
1931	31,817
1932	25,207
1933	23,176
1934	19,704
1935	18,422
1936	17,741
1937	18,996

HOSPITALS AND OTHER INSTITUTIONS.

The following table shows the average daily number of patients in hospital:

State.	Average daily No. of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1936.	1937.	1936.	1937.	1936.	1937.	1936.	1937.
Perak	1,652	1,861	43,308	50,893	3,337	3,874	7.71	7.61
Selangor	1,029	1,105	25,846	29,194	1,917	2,249	7.41	7.70
Negri Sembilan ...	763	825	15,780	18,815	1,194	1,385	7.56	7.30
Pahang	506	601	13,617	16,996	813	986	5.97	5.80
Total ...	3,950	4,392	98,551	115,898	7,261	8,494	7.36	7.32

The total number of outpatients treated at hospitals and dispensaries (including travelling dispensaries) apart from those treated at special institutions such as infant welfare centres, venereal disease clinics, etc., was 738,211, the corresponding figure for 1936 was 714,560.

INFANT WELFARE CENTRES.

The work in the infant welfare clinics continued successfully and there was a gratifying increase in the number of attendances which were 183,123 or 22,337 more than in 1936.

The work in the established centres progressed and extended while two new centres were established in Perak and one in Selangor.

Dental work was commenced at one additional centre in Selangor and the number of attendances for treatment has grown progressively since its inauguration.

The centres are in the charge of a Lady Medical Officer or a Sister and they are assisted by a staff of Asiatic nurses.

The educational side of the centres continued to be of primary importance and every effort was made to continue lectures and practical demonstrations.

Ante-natal work is being carried out on an increased scale, and includes physical and laboratory examination as well as arrangements for dental treatment. The principal function of the clinics, however, is to teach mothers how to look after their children properly. The health visitors visit the homes of newly-born infants, and later encourage the mothers to come to the centres. Health visitors are well received everywhere. At all centres the majority of those who seek advice are Chinese.

CENTRAL MENTAL HOSPITAL.

The number of patients on the 31st December, 1936, was 2,626. The number of admissions during the year was 1,225. This is the largest number ever admitted in one year. In 1936 and 1935, the admissions were 1,087 and 963, respectively. The number remaining at the end of the year 1937, was 2,883.

ADMISSIONS.

Males.	Females.	Total.
851	374	1,225

The most common forms of mental disorder among the admissions were:

Confusional insanity	510
Senile dementia	272
Dementia praecox	192
Melancholia	61

Seven hundred and fifty patients were discharged during the year. Two hundred and eighty-three patients were discharged as recovered, three hundred and sixty-nine as relieved and ninety-eight were discharged as unimproved.

Two hundred and four patients died during the year. This is one less than the previous year and gives a death-rate of 5.29 per cent. on the total treated.

The general health of the patients was good throughout the year. There was a decrease in the number of cases of malaria; 100 cases were treated as compared with 101 in 1936.

The farms continued to be productive and the hospital is self-supporting as regards fruit, vegetables and pork.

DECREPIT SETTLEMENTS.

Decrepit settlements at Taiping, Kampar, Kuala Lumpur, Serendah, Kajang and Tampin were maintained and an additional one was inaugurated at Sitiawan for female decrepits.

The total average daily number of inmates during the year was 776.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment (Cap. 137). Towns and villages which consist of a score or so of houses, but which are not Sanitary Board areas proper, are generally brought under modified control by applying some of the provisions and by-laws under Part X of the Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank-floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

HOUSING OUTSIDE SANITARY BOARD AREAS.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part estate or mine managers and fairly well-to-do Asiatics, but their houses are, as a rule, of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of health.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Natural Resources.

MINERALS.

The minerals of commercial importance at present known in the Federated Malay States are tin-ore, coal, gold, tungsten ores, iron-ore, ilmenite, and china clay, and deposits are also known of quartz, manganese-ore, bauxite, galena (lead-ore), arsenopyrite, pyrite, chalcopyrite (copper-ore), fluorite, phosphate and other minerals, though the value of the second group is not yet proved, either because economic quantities are not known to be present, or because there is no local market for them, and because the cost of freight to countries where there is a demand would be prohibitive. So far as is known, there are no supplies of oil in economic amount.

TIN-ORE.

Tin-ore is the greatest mineral asset of the Federated Malay States; this country is the biggest tin producer in the world. Cassiterite, tin dioxide, is the only important ore of tin, and, nearly always it is associated with granite. The enormous quantity of hot liquid matter that solidified to form the granite foundation of the Malay Peninsula contained a small percentage of tin, most of which became concentrated into a much smaller amount of material that remained liquid after the granite had become solid. It was finally deposited as tin-bearing quartz-veins and lodes in cracks and fissures in the granite and in the sedimentary rocks that covered it. One of the largest and most productive lode tin mines of the world is in the Federated Malay States, a fact that is not widely known. However, most of the Malayan production of tin-ore is from alluvial deposits, that is, from beds of unconsolidated sand and clay that have resulted from the erosion of lodes and veins, and the hardness of cassiterite and its power of resistance to the potent agencies of tropical weathering have preserved in the alluvial beds a large proportion of the mineral contents of the numberless veins that must have permeated the thick mantle of schist and limestone that once covered our granite mountains.

In spite of long-continued exports on a very large scale, there are still large reserves of tin-ore in the Federated Malay States, and the yearly output could be made to exceed 100,000 tons of tin without much difficulty but for the fact that production is limited by an international control scheme, introduced on 1st March, 1931. Each mine in the Federated Malay States has been given an assessment, representing the output permissible when the domestic quota is 100 per cent., and the total of such assessments in 1937 came to 96,628 tons of metal. However, the standard tonnage allotted to the whole of Malaya by the international agreement is only 71,940 tons, and, as part of this must be shared by the Unfederated Malay States and Malacca, while still another part is supplied by "dulang" washers, Sakai workings, and confiscated ore, the amount available for the Federated Malay States mines is much less than the potential full production of the country.

The following is a comparison between the international and domestic quotas for the different quarters of the last three years.

—	1935.		1936.		1937.	
	International.	Domestic.	International.	Domestic.	International.	Domestic.
January-March ...	40	28.3	90	65	100	72
April-June	45	32.4	85	62	110	79
July-September ...	70	46.7	90	65	110	80
October-December ...	80	62	105	76	110	80

During this period, the exports of tin and tin-in-ore from the Federated Malay States have been

	1935.	1936.	1937.
Tons of metal exported ...	40,749 ...	64,719 ...	75,394
Under F.M.S. quotas which averaged	42.35% ...	67· % ...	77.75%

As described above, these exports do not represent normal production but the amount permissible under the restriction that was imposed to conform with the international agreement. At the end of 1936, Malaya carried forward an overproduction of 193 tons of tin, increased to an overproduction of 400 tons at the end of 1937, though a revision of the latter figure may be necessary when the final statistics are received from the International Tin Committee.

The methods of mining tin-ore in the Federated Malay States, arranged in their order of importance from the point of view of output, are dredging, gravel-pump mining, hydraulicing (either with water brought by pipeline from the hills under a natural pressure supplied by the height of the intake, or under pressure supplied by machinery, or with water not under pressure) lode-mining, and open-cast mining.

The prolonged steeping in groundwater to which alluvial ore has been subjected has leached away many of the impurities that contaminate it in drier countries, and so the assay value of Malayan ore is unusually high.

1932.	1933.	1934.	1935.	1936.	1937.
75.38%	75.47%	75.39%	75.56%	75.54%	75.58%

The percentage of tin in tin dioxide, not likely ever to be found perfectly pure as a natural mineral, is 78.6 per cent.

VARIATIONS IN THE PRICE OF THE METAL TIN.

The following table gives the prices ruling during the last five years in dollars per pikul tin and sterling per ton tin.

—	1933.					1934.					1935.				
	£	s.	d.	$	c.	£	s.	d.	$	c.	£	s	d.	$	c.
Highest... ...	228	17	6	124	00	242	7	6	121	00	229	5	0	116	25
Average ...	194	15	2	99	99	229	6	0	114	41	217	16	3	111	32
Lowest	142	0	0	71	75	222	10	0	110	62½	204	10	0	105	50
Fluctuation ...	86	17	6	52	25	19	17	6	10	37½	24	15	0	10	75

—	1936.					1937.				
	£	s.	d.	$	c.	£	s.	d.	$	c.
Highest	241	10	0	121	25	303	15	0	149	00
Average	200	5	9	100	39	240	16	4	119	75
Lowest	172	5	0	85	62½	180	5	0	85	00
Fluctuation	69	5	0	35	52½	123	10	0	64	00

COAL.

Reckoned by the value of outputs, next to tin-ore coal is the most important mineral, and, apart from the revenue it brings from royalties, it is valuable to the country as a source of cheap power for use in industries. It is sub-bituminous coal, jet-black in colour with specific gravity 1.3. It is fairly hard, and has conchoidal fracture. The total area covered by the known outcrops of coal-bearing strata in the Federated Malay States is small, and it is doubtful if deposits of economic value other than the one occurrence at Batu Arang mined by Malayan Collieries, Limited, will ever be found. However, the total production at Batu Arang, from 1915 till the end of 1937, has been more than eight million tons, and the output this year was 627,890 tons. Large reserves are available.

Probably the coal would be more accurately described as high grade lignite. Although enough fossils have not yet been found to give definite confirmation, yet an analysis indicates either Pliocene age or Upper Miocene.

Moisture	21 per cent.
Ash	9 ,,
Volatile matter	35 ,,
Fixed carbon	35 ,,
Calorific value:	
as received	9,000 B. Th. U. per lb.
dry coal	11,300 ,, ,,
dry ash-free	13,000 ,, ,,

The coal has the unfortunate characteristic of being liable to spontaneous combustion, so that careful handling is necessary during extraction and while it is in store.

GOLD.

The output of gold for the last five years has been:

	Lode.	Alluvial.	Total.
	ozs.	ozs.	ozs.
1933	26,358	2,678	29,036
1934	24,310	5,911	30,221
1935	22,909	6,862	29,771
1936	29,449	8,330	37,779
1937	23,807	10,021	33,828

More than 65 per cent. of this year's production was mined from lodes at the Raub Australian Gold Mine, and most of the remainder came from beds of sand and gravel in Perak, Pahang and Selangor. In several localities, gold is associated with dykes of a fine grained variety of granite, best described as quartz-mica rock. It is a late-stage phase, emplaced after the consolidation of the granite, and the presence in it of quartz stringers containing gold indicates that this probably was the source from which the gold lodes came. However, it is not a rock type susceptible to the formation of long fissures such as could act as important lode channels; the most favourable field for prospecting seems to be shatter-zones in shale and phyllite near it.

The principal lodes at the Raub Mine occupy almost vertical fissures formed by fracturing along compression-faults parallel with the bedding-planes of hard steeply-dipping calcareous shale. A typical lode-channel has well-defined walls, highly polished and slickened, black, graphitic planes, between which the shale has been either brecciated or thrown into acute folds. There is white quartz also in the channel, generally laminated with black films of graphite and shale. The proportion of shale to quartz is different at different points; usually there is more shale. Ore occurs in the lodes as relatively rich shoots separated by zones which are either barren or contain gold in quantity too small to be mined.

During the last year or two the Raub Hole, near the southern extremity of the property of the Raub Australian Gold Mine has been re-opened, and it now supplies an appreciable part of the output. The gold occurs in thin quartz stringers occupying tension-faults at right angles to the direction of the lodes a mile or so north. They are less than an inch thick, but some are quite rich, and it pays to mine groups of them in large stopes, removing a great quantity of unmineralised shale to obtain a small amount of ore.

The Batu Bersawah Gold Mine in Negri Sembilan, closed about thirty years ago, has been the scene of active operations once more, and prospecting is continuing in spite of the temporary setback experienced when the old workings were found to extend to 300 feet below the surface, not merely to the 240 feet indicated by old records.

Gold mixed with tin-ore is obtained from the alluvium of the Batang Padang district, the production of gold during the last six years having been:

1932.	1933.	1934.	1935.	1936.	1937.
ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
1,405	2,678	3,753	6,527	7,789	7,043

A geological survey has shown that there is but little chance of finding payable lodes. The alluvial gold has been derived by erosion from numberless small veins of quartz in schist, phyllite and foliated granite, and most of this year's production at the Bruseh Estate Gold Mine has come from hydraulicing a hill of weathered schist and phyllite, an acceleration by man of the method used by nature.

TUNGSTEN ORES.

The metal tungsten continues in demand for the reason that more than 90 per cent. of the world's supplies of it are absorbed by the now completely revived steel industry. Tungsten-steel is very tough and finds a special use in the manufacture of high-speed tools because the alloy retains its temper at great heat.

Scheelite.—Of the two main tungsten minerals, scheelite, calcium tungstate, is more important in the Federated Malay States than wolfram, tungstate of iron and manganese, because there is an extraordinary deposit at Kramat Pulai, near Ipoh, which, in the last five years, has yielded the following large outputs:

1933.	1934.	1935.	1936.	1937.
918 tons	1,508 tons	1,365 tons	1,364 tons	836 tons

A large ore-body near the margin of the enormous granite intrusion known as the Main Range is constituted almost entirely of fluorite and scheelite, lying under a roof of extremely hard schist, where it originated from the replacement of pure crystalline limestone. An extensive scheme of prospecting by diamond drills is in progress, searching for similar underground deposits in neighbouring localities where the geological structure seems to have been favourable, but no new ore-body has so far been discovered. Parts of the original mass of fluorite and scheelite have been found that had been separated from their parent by faulting, but large reserves have not been proved.

Wolfram.—Small quantities of wolfram are mined in Perak, Selangor and Negri Sembilan, outputs for the last five years being

1933.	1934.	1935.	1936.	1937.
33 tons	28.5 tons	8 tons	3 tons	27 tons

IRON-ORE.

In spite of the large exports from the Unfederated States, the only production of iron-ore in the Federated Malay States during the year was from a well known deposit of haematite near Ipoh, Perak, where about 1,140 tons were mined, to be sold for local use as "ragging" in dredge-jigs. However, extensive deposits of mixed haematite, magnetite and limonite have now been proved in Ulu Rompin, Pahang, and it is probable that there are considerable supplies elsewhere, hidden by the thick cover of soil and vegetation that obscures so much of the surface of the country.

ILMENITE.

Ilmenite is a compound of titanium, iron and oxygen and about 6,250 tons of "amang", consisting mainly of ilmenite, were exported from the Federated Malay States in 1937, 4,569 tons to the United Kingdom, 1,271 tons to Germany and 411 tons to Japan. About 240,000 tons of amang are easily accessible in dumps, but it is located in tin mining districts at some distance from the sea, and the cost of transport to steamers prevents the Federated Malay States from being a serious rival to India in this new industry. The Travancore deposits occur on the seashore, and, according to the Director of the Geological Survey of India, 140,477 tons were exported from there in 1936, valued at £62,418.

A chemical process is employed to extract titanium oxide from the *amang*. Titanium oxide is a compound that is used as a filler and pigment in making brush and spray lacquers, ideal for the purpose because of its covering power, perfect whiteness, and because it is chemically inert to the solvents used in mixture with it. It is employed also in the manufacture of bakelite, linoleum, coated textile, rubber, wall-paper, printing inks, glass and enamel ware.

CHINA CLAY OR KAOLIN.

China clay or kaolin is mined on a small scale near Tapah in Perak and at Cheras in Selangor, for local use as a filler in the manufacture of rubber goods. Outputs for the last three years have been:

	1935. tons.	1936. tons.	1937. tons.
Perak	91	121	177
Selangor	—	—	86

There are very large supplies of china clay available in the Federated Malay States, notably in weathered fine-grained granitic rock of the Bidor district, and in weathered microgranite at Tronoh, both consisting almost entirely of kaolin and quartz, and other areas could be found if required. However, a small quantity is sufficient to supply the needs of local industry.

AGRICULTURE.

Agriculture and tin mining continue to be the two most important industries in the Federated Malay States. Crops are grown on properties ranging in size from small-holdings of one-half an acre to large estates of several thousand acres.

The following review of agriculture in the Federated Malay States in 1937 is divided into three parts: A—crops grown on large estates and small-holdings: these include the major permanent crops, rubber and coconuts, together with coffee, bananas, pineapples and tea; B—a crop grown solely by large estates, i.e., the oil palm; and C—crops grown exclusively by Asiatics, which comprise the important rice crop, tobacco, arecanuts, fruit and vegetables.

A.—CROPS GROWN ON LARGE ESTATES AND ON SMALL-HOLDINGS.

Rubber.—The total area under rubber in the Federated Malay States at the end of 1937 was estimated to be 1,623,045 acres made up as follows:

—	Estates of over 100 acres.	Holdings of less than 100 acres.	Total.	Increase or decrease compared with 1936.
Federated Malay States ...	1,033,426	589,619	1,623,045	+46,635

The immature area on estates amounted to 77,424 acres, that on small-holdings is not known.

PRODUCTION AND CONSUMPTION.

The production of rubber during 1937 is shown below:

—	By estates of 100 acres and over.			
	1934.	1935.	1936.	1937.
Federated Malay States	147,417	133,067	125,005	166,255

—	By small-holdings of less than 100 acres.			
	1934.	1935.	1936.	1937.
Federated Malay States	104,141	67,380	62,596	91,134

—	Total.			
	1934.	1935.	1936.	1937.
Federated Malay States	251,558	200,447	187,601	257,389

Rubber Regulation.—Rubber production during the year was regulated in accordance with the International Agreement, 1934-1938, and the system continued to work smoothly. The releases were: for the first quarter 75 per cent.; second quarter 80 per cent.; third and fourth quarters 90 per cent.

CONDITIONS ON ESTATES AND SMALL-HOLDINGS.

Under the agreement, replanting was permitted to the extent of 10 per cent. of each owner's holding in any one year and to a total of 20 per cent. of the holding during the period 1st June, 1934, to 31st December, 1938. The area replanted during 1937 was 18,353 acres, much less than the total amount permissible under the agreement. Manuring continued to engage the attention of estates during 1937. Convincing results are now being obtained from the experiments started a few years ago by the Rubber Research Institute of Malaya and by other concerns; and it is, therefore, likely that manuring will become a standard practice on plantations, so long as the price of rubber does not fall much below its present level.

The scheme for experimental planting of new land was almost completed in 1937. The regulations permit new planting for experimental purposes up to a total of one-quarter of one per cent. of the total area under rubber in the country during the period of the agreement. The experiments are carried out under the control of the Rubber Research Institute of Malaya, with whom and the Controller of Rubber, the estate enters into an agreement as regards maintenance and continuity. The experiments are designed to investigate all important aspects of rubber planting.

The total budgrafted area in 1937 was 120,927 acres as compared with 111,369 acres in 1936. Several small-holdings have undertaken budding under the supervision of the Asiatic Rubber Instructors.

The area out of tapping on estates in the Federated Malay States at the end of the year was estimated to be 231,651 acres. Surveys of the area of small-holdings out of tapping were made and indicated that about 37 per cent. of the total area was untapped during the first quarter of the year and about 19 per cent. at the end of the year.

The trade in coupons without rubber and in uncouponed rubber has again been a noticeable feature of the small-holding rubber market. The price of rubber for export is in effect made up of two parts, the price of the uncouponed rubber and the price of the coupon. The proportions between these two parts fluctuate very widely with the variations in the quota release.

The generally improved conditions of small-holdings are being maintained, particularly with regard to disease control and preparation of the product, while there has been some degree of improvement in tapping. In Pahang the total number of smoke cabinets erected by the end of the year was 166, practically all of which were in use.

The Asiatic staff of the Small-Holder's Advisory Service which is maintained by the Rubber Research Institute but mainly supervised by the Agricultural Officers of the Field Branch of the Department of Agriculture, comprises ten officers in the Federated Malay States distributed as follows: Perak 3, Selangor 3, Negri Sembilan 2, Pahang 2.

The All-Malayan Small-Holder's Rubber Competition was held in August whereat selected prize-winning exhibits from the District Shows were finally judged at Kuala Lumpur.

Coconuts and Coconut Products.—Coconuts are grown both as an estate crop and also on numerous small-holdings throughout the Federated Malay States. Coconut estates are confined to the Bagan Datoh district of Lower Perak and the coastal area of the district of Krian in the State of Perak and to the Coastal areas of the districts of Kuala Selangor and Kuala Langat in the State of Selangor. The estimated acreages under cultivation in the crop are shown below:

	Areas grown on estates of over 100 acres.	Areas grown on small-holdings less than 100 acres.	Total.
Federated Malay States ...	94,146	156,574	250,720

The cultivation of this crop for copra production is only extensively practised by small-holders in the coastal area of Selangor, where there are about 70,000 acres of coconut small-holdings. There is a considerable trade in fresh nuts from small-holdings on coastal areas to inland districts where local supplies are deficient.

The Singapore price of sundried copra opened at $9.50 per picul and improved during January to $10.30. Before the end of that month, however, the price fell to $7.50. During February, March and the first half of April the price remained around $7.50 to $8.50; thereafter, apart from minor fluctuations, the price fell steadily until, early in December, it reached the low level of $4.50. The year closed with the price at $4.75.

CONDITIONS ON ESTATES AND SMALL-HOLDINGS.

There has in recent years been a very marked improvement in the general standard of copra produced by estates and they are now mostly producing copra which is above the best standard grade for export. In parallel, however, with the serious decline in the price of copra, a number of estates which at one time voluntarily improved their product by hand picking have now ceased to do so.

The end of the year's seasonal drop in crop was much less marked than last year. There has been a distinct improvement in the appearance of the palms and in yields in the area in the Bernam Peninsula of Selangor which is protected from inundation of sea water by the coastal bund. Similar improvement, more especially in nut size, is noted in the Rantau Panjang area of Selangor also recently protected by a bund.

The quality of kampong-produced copra at present in Malaya varies very greatly. Much of the native copra now produced is of estate quality and some is even up to Ceylon standards. Nevertheless it has latterly become increasingly difficult to obtain any, or at all events adequate, recognition in the price commanded by a better quality product. Consequently many producers are now again offering under-dried copra, though it is often whiter than formerly.

Pineapples.—The area under pineapples in the Federated Malay States at the end of 1937 was 12,000 acres, as compared with 11,084 acres in 1936. Of this area 9,455 acres were in Selangor.

The average Singapore prices per case of 48 tins of 1½ lbs. each of Malayan pineapples (cubes) and of 100 first quality fruit were respectively $3.02 and $2.27. Corresponding prices in 1936 were: $3.29 for cubes and $3.29 per 100 first quality fruit.

The depressed state of the industry was reflected in the lower standard of upkeep maintained on plantations. In the case of small producers, groups of holdings were left in the charge of a skeleton staff to attend to harvesting while on the larger estates only the best of the fruits were harvested and much poor quality fruit remained unpicked to rot in the field.

Canning Research.—In April, the three Governments of the Straits Settlements, Federated Malay States and Johore undertook to provide funds for the erection of a Canning Research Station on the Scudai Road about five miles from Johore Bahru, the cost to be borne jointly in agreed proportions.

At the time of writing, good progress has been made in the erection of the buildings and it is hoped that an automatic canning plant will be in working order towards the end of 1938.

Coffee.—Coffee is grown both on estates and small-holdings either as a sole crop or else interplanted with other cultivations. In the Federated Malay States there are 11,110 acres under the crop, the most important centre of production being Selangor. The crop is grown by numerous Malay and Chinese small-holders, particularly in the coastal district of Kuala Langat. Practically none of the coffee produced in Malaya is exported. In 1937 the imports into the Federated Malay States amounted to 1,064,657 lbs. valued at $139,348.

In the lowland districts the varieties of coffee cultivated are either of the Liberian or the Robusta type. In the Cameron Highlands area trials have been in progress for some years with the cultivation of Arabian coffee and there are about 317 acres planted under the crop in this area.

Locally grown coffee finds a ready market in Malaya, and is retailed in tins either as Malayan coffee or blended with imported coffee. Statistics of the amount of locally grown coffee produced are not available.

Tea.—The area under tea in the Federated Malay States at the end of 1937 was 3,439 acres as compared with 2,352 acres at the end of 1936. Of this total 2,041 acres were planted on upland estates, i.e., on Cameron Highlands and 1,398 acres on lowland estates on the plains in Selangor and Perak and on small holdings owned by Chinese in Selangor and Negri Sembilan.

The production from small holdings is unknown, that of estates was 822,439 lbs. of made tea, as compared with 703,863 lbs. in 1936.

Consumption.—Of the total Malayan-produced estate tea, of which the major part is produced in the Federated Malay States, 583,000 lbs. were exported to London and 411,500 lbs. sold locally. Corresponding figures for the previous year were 650,400 and 290,000 lbs. It is evident, therefore, that local growers are giving greater consideration than before to the local market. That there is ample scope for further developments in this direction is evidenced by the fact that the net Malayan imports of tea in 1937 increased by about 800,000 lbs. over the previous year to a total of 4,681,000 lbs., valued at $1,067,000.

Tea Restriction.—Under the International Tea Agreement, into which Malaya entered at the end of 1936, it was agreed to limit the planting of new areas in this country during the period of the Agreement (to 31st March, 1938) to 3,000 acres, or to limit the total area to about 6,000 acres. The area planted under licence in 1937 was 801 acres. Licences were renewed to plant a further 1,020 acres before the end of March, 1938, when the present Agreement terminates. Negotiations proceeded during the year with the International Tea Committee about the terms upon which Malaya would be prepared to enter a new Agreement in 1938, but no conclusion has yet been reached.

Derris.—The area under this crop at the end of 1937 was 4,854 acres, as compared with 3,578 acres in 1936.

Prices.—In 1936, derris root, sold on rotenone content, had commanded the very satisfactory average price of $48.58 per picul in Singapore; and root sold on ether extract basis an average price of $31.54 per picul. The prices of both kinds were well maintained during the first six months of 1937, but during the latter half of the year they first sagged and then dropped sharply in November and December to $26 per picul on rotenone basis and $16 on ether extract. The average prices for 1937, though less than in 1936, are considered to be satisfactory; but the position of the market at the end of the year and the prospects for the near future are not very encouraging.

B.—Crops Grown Solely on Large Estates.

Oil Palms.—The total area planted under oil palms and reserve land at the end of 1937 in the Federated Malay States was 35,280 and 12,976 acres respectively. This represents an increase of 1,174 acres in the area planted as compared with 1936.

All of the produce was exported with the exception of small quantities of oil which were used for the manufacture of soap. Production of oil palm and kernels in the Federated Malay States during the past five years is shown in the following table:

Year.	Palm oil. Tons.	Kernels. Tons.
1932	7,076	1,212
1933	9,333	1,600
1934	12,965	2,013
1935	17,339	2,711
1936	23,081	3,791
1937	27,733	5,095

It is to be anticipated that the output of the industry will show considerable annual increases for some years to come as the more newly planted areas come into full bearing.

During the year prices of palm oil and palm kernels declined steadily from £29 per ton in January to £17 in December. The average prices for the year were as follows:

> Palm oil £22. 3*s*. 4*d*. per ton and palm kernels £12. 14*s*. 5*d*. per ton. There are now 23 oil palm factories operating in the Federated Malay States (including the factory on the Central Experiment Station, Serdang).

C—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—The area planted with rice in the Federated Malay States during the season 1936-1937 amounted to approximately 185,730 acres of which 182,670 was under "wet" rice and 3,060 under "dry" rice. It is grown exclusively by Asiatics on small holdings of an average of 2½ acres each. It has been estimated that a holding of this size will, under Malayan conditions, yield sufficient rice to feed a family of six people and will leave some surplus available for sale.

The crop is cultivated both on coastal alluvial lands and also in the bottoms of shallow valleys which are the characteristic features of the inland regions in many parts of Malaya. This gives rise to two alternative types of rice fields. On the one hand there are continuous stretches of rice such as are seen in the coastal areas of Krian and on the other hand a series of separate areas of varying size in the valleys.

The area planted with rice in the Federated Malay States in the season 1936-1937 and the total yields are shown below:

Wet.		Dry.		Total.	
Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
182,670	53,367,000	3,060	494,000	185,730	53,951,000

Season 1937-1938.—As the result of the continuance of dry weather until mid-September, planting in south-east Krian was very late and irregular, cultivation was hurried and often inadequate (more especially in respect of the rotting down of the cut fallow season growth in areas where ploughing is not practised) and seedlings were perforce often kept in the nurseries much beyond the normal period before they could be planted.

The prospect for the season 1937-1938 is a good average one in Selangor, Negri Sembilan and Pahang. In the Panchang Bedena and Tanjong Karang areas of Selangor planting was again extremely late owing to dry weather, but experience has shown that given freedom from rat damage, the soil in much of the Panchang Bedena area is so fertile that it will produce a fair average crop under conditions of water scarcity which would be fatal in less rich land.

Rat Control.—In Krian rat damage done was negligible. In the Sungei Manik area of Perak and the Panchang Bedena area of Selangor much damage was again done to the crop in places close to jungle or where stumps and felled timber are still present in large quantity. A rat control organisation has been formed in both these areas on the lines of those which have proved so successful in Krian, Province Wellesley and Malacca.

High Yielding Strains.—The distribution of pure strain seed to cultivators is made either on cash payment or in exchange for an equal quantity of the cultivator's seed. The demand for high yielding strains continues to be confined chiefly to the areas where padi is grown as a commercial crop, as opposed to where a small plot is grown to supply the rice requirements of the grower and his family.

Government Rice Mills.—The two Government rice mills in Krian purchased 14,077 tons of padi and produced 88,351 bags of rice of which 53,422 bags were parboiled rice and 34,929 white and undermilled rice. The price paid for padi was $2 a picul throughout the year, except for a short period at the beginning of the season when the price was $1.90 a picul. A premium of 10 cents above these quotations was paid for Seraup 48 padi of the required standard.

Tobacco.—The amount of tobacco produced is not known, but it is totally inadequate to supply the demand.

The leaf, either fresh or sun dried, is sold to Chinese or Indian owners of small factories who manufacture cheroots which are retailed at from half a cent to two cents each. The demand for these cheroots among the labouring classes is steady and is probably capable of expansion.

The areas under this crop are mostly small and scattered, but small as is this industry, tobacco constitutes a valuable rotation crop in many Chinese market gardens.

The area under tobacco in the Federated Malay States at the end of 1937 is calculated to be about 1,556 acres. As this is a three months crop, the area cultivated during the year may be greatly in excess of the area under this crop at any one time.

The prices of local tobacco varied greatly in different localities and ranged between $20-$55 per picul for the first quality and $8 to $30 for the third quality.

Fruit other than Pineapples.—Interest in fruit cultivation has increased during the past few years and greater attention is being paid by growers to the quality of stock planted. This increased discrimination has resulted in a steady demand for budded plants from Agricultural Stations.

The total area under fruit other than pineapples in the Federated Malay States in 1937 was 50,114 acres of which 13,622 acres were under bananas. In 1936 the total area was 40,029 acres.

Vegetables.—The total area under vegetables is unknown, but is considerable, and market gardening, especially in the vicinity of towns, continues to flourish. So far as it has been possible to collect data, it appears that the total planted area is about 7,800 acres. Of this, 5,172 acres are classified as market gardens, in which crops other than vegetables may be planted from time to time in rotation with vegetables. In addition to these market gardens there are 116 acres under sugar cane, practically all of which is eaten in the raw state. Groundnuts occupy 417 acres, maize 150 acres and yams 110 acres. Sweet potato, 1,644 acres is a popular crop amongst Chinese cultivators, both for feeding pigs and for human consumption. The production of vegetables from Cameron Highlands is now an established industry. Three hundred and eighty-seven tons of fresh vegetables grown there were despatched by railway to various parts of the country during 1937.

Arecanuts.—The crop is cultivated on an area of 4,624 acres in the Federated Malay States, where it is much less popular than in the Unfederated Malay States.

Market prices improved in 1937, the average declared trade value of arecanuts being $7.71 per picul as compared with $6.83 per picul in 1936. The local market price varies considerably according to quality and it is therefore difficult to strike an average price for the year. The average prices per picul in Singapore of "splits" and sliced were $7.79 and $13.35 respectively.

Experimental work on the cultivation of a large number of varieties of arecanut were continued at the Klang and Serdang Experiment Stations, while areas under selected varieties exist, on a number of agricultural stations.

GENERAL.

There are 13 agricultural stations, two padi breeding stations, one other main padi station and 23 padi test plots in the Federated Malay States. These were maintained in satisfactory order during the year. At the Central Experiment Station, Serdang, work was continued on a large number of crops; the station continued to attract many visitors. Work at the Coconut Experiment Station at Klang proceeded in accordance with the established programme together with experimental work on copra production. Rice breeding work was continued at the two Experiment Stations at Titi Serong and Tallang, while a large number of experiments on tea were continued at the Experiment Station at Cameron Highlands as well as at Serdang. The agricultural stations continued to discharge their function on the lines which they were designed to follow and have proved their value as centres for demonstration, instruction and the supply of planting material.

School gardens were maintained in the Federated Malay States during the year; the general standard of work thereon continued to improve and the annual competitions showed a satisfactorily high standard of upkeep.

The Malayan Agri-Horticultural Association held its 14th Malayan Exhibition in Kuala Lumpur in August, and a number of district shows were held, as usual, during the year.

The School of Agriculture, Malaya, situated at Serdang, and supported jointly by the Federated Malay States and the Straits Settlements Governments continued to operate very successfully. The school year opened in May, 1937, with a complement of 73 boys. Of the 54 students who left school in April, 31 have obtained employment either in the Government service, the Rubber Research Institute of Malaya or in private companies.

The erection of new laboratory buildings at the headquarters of the Department of Agriculture at Kuala Lumpur was begun in May, 1937.

LIVESTOCK.

The control of the dairy farm at Fraser's Hill was transferred from this department to the Government of Pahang as from 1st January, 1938.

The herd at the Central Experiment Station, Serdang, consisted of 68 animals including 24 milking cows. A portion of the milk derived from this undertaking was sold to Government hospitals and the remainder to private consumers in Kuala Lumpur.

The section of the farm devoted to pig breeding has again proved successful and 20 head were sold for breeding purposes during the year mainly to Chinese pig breeders and market gardeners in Selangor.

Much attention has been devoted to the improvement of poultry on small holdings throughout the Federated Malay States. Experience both in Malaya and elsewhere in the tropics appears to provide confirmation that the Rhode Island Red is a suitable breed to rear for general distribution. Success in the past has not been unqualified at several stations, owing to the flocks kept being too small to provide the minimum requirement of breeding pens to maintain a reasonable flock, much less to provide birds for distribution on anything but a meagre scale. With the object of remedying this defect and to simplify the importation of fresh stock as and when required, it has been arranged that the School of Agriculture should provide material for establishing and maintaining stocks at agricultural stations. The poultry breeding establishment at the school is being steadily developed to enable it to fulfil this function of supply to agricultural stations.

Poultry diseases have continued to take toll of kampong stocks, but no particularly serious outbreaks have been reported. Instruction on poultry husbandry was continued in connection with tours of the rural lecture caravan and talks were given on better housing and feeding of village poultry at all centres visited.

LIVESTOCK.

A census of the livestock collected by the Veterinary Department during the year shows the following figures:

State.	Oxen.	Buffaloes.	Sheep.	Goats.	Swine.	Horses.
Perak	25,289	16,290	915	41,610	106,394	134
Selangor	18,700	3,080	661	31,633	150,541	85
N. Sembilan	11,978	13,266	3,301	25,042	53,906	11
Pahang	5,892	24,866	5,312	24,453	17,326	21
Total (1937) ...	61,859	57,502	10,189	122,738	328,167	251
„ (1936) ...	60,572	54,837	8,529	131,154	260,125	325
Total increase for 1937 ...	1,287	2,665	1,660	...	68,042	

Taking the average values of these animals at $50 per head for oxen, $60 for buffaloes, $5 for sheep, $6 for goats and $15 for swine, the approximate values of this livestock may be estimated as follows:

	1937 valuation.	1936 valuation.	Increase or decrease.
	$	$	$
Oxen	3,092,950	3,028,600	+ 64,350
Buffaloes ...	3.450,120	3,290,220	+ 159,900
Sheep ...	50,945	42,645	+ 8,300
Goats ...	736,428	786,924	− 50,496
Swine ...	4,922,505	3,901,875	+ 1,020,630
Total ...	12,252,948	11,050,264	+ 1,202,684

Comparing the census of 1937 with that of 1936 there is a general increase except in goats as follows:

State.	Oxen.		Buffaloes.		Sheep.		Goats.		Swine.	
	+	−	+	−	+	−	+	−	+	−
Perak	...	745	897	...	513	...	...	3,132	26,147	...
Selangor ...	1,031	...	325	...	166	...	...	5,076	25,083	...
Negri Sembilan	623	...	911	...	354	...	2,051	...	15,757	...
Pahang	378	...	532	...	627	...	...	2,259	1,065	...
	2,032	745	2,665	...	1,660	...	2,051	10,467	68,052	...
Total variation	1,287	...	2,665	...	1,660	...	...	8,416	68,052	...

This variation is valued as an increase in livestock wealth amounting to $1,202,684; of this total swine account for $1,020,630.

Oxen show a relatively small increase being only 2.08 per cent. This low increase is accounted for in part by the fact that a large number of the animals enumerated are carting oxen. In addition, large numbers of oxen are slaughtered for meat but as these are usually of the poorer type this can be looked upon as beneficial rather than otherwise since it results in retention of the better class breeding animals. This means of selection should result in general improvement of the standard of oxen.

Buffaloes show an increase corresponding to 4.63 per cent. of the total population. This figure is not so high as might be desired but considerable numbers have formed the source of the meat supply. The ratio of males to females is high, being about 1: 2. This high ratio indicates that in an emergency a supply of buffalo meat could be available without unduly diminishing breeding herds. At present, this supply is not easily drawn upon since the owners, who are chiefly Malays, do not readily sell their animals. The slaughter of female buffaloes is discouraged as much as possible.

Sheep show an increase of 1,660 which represents 16.29 per cent. of the total population. This figure includes small stocks of Australian sheep awaiting slaughter. The natural increase is encouraging and applies more particularly to Negri Sembilan and Pahang where the largest numbers are to be found. Ownership is chiefly Malay who frequently appreciate mutton, although the majority prefer goat meat. Local breeding could form a useful industry for the supply of small quantities of fresh meat to kampongs.

Goats form an important livestock industry and are in great demand for slaughter. This has resulted in a considerable decrease but the figures have not fallen to the 1935 level. Here again, there is an excess of males and it is perhaps unfortunate that no legislation exists to prohibit the slaughter of females. On the other hand indiscriminate slaughter of males to the exclusion of females could result in a lower standard in the type of animals bred. The slaughter of goats is considerable the supply to abattoirs being met chiefly from locally bred animals. The number of goats imported is very low, viz., 3,351, or 15 per cent. of the 22,374 goats slaughtered.

Swine show a considerable increase especially in Perak and Selangor. The increase over the total population for 1937 is 20.7 per cent. or 68,052. This is very encouraging, and shows that the States can be entirely self-supporting in respect of swine for supply of fresh pork, and indeed that it should be possible to develop an export trade to centres such as Singapore.

A census of poultry has not been attempted but as all sections of the community keep birds and as there is a considerable trade between the rural districts and the towns throughout the country the value of the industry must be very considerable. Facilities are not available for the selection and improvement of local strains of poultry but it would appear that there is scope for such work in addition to the policy of grading up of local stocks by the introduction of European types.

SLAUGHTER OF ANIMALS IN THE FEDERATED MALAY STATES.

The figures given below are returns for the Sanitary Board slaughter-houses and as such are correct. No attempt, however, has been made to include the numbers of animals slaughtered privately which no doubt amounts to quite a considerable number annually.

—	Perak.			Selangor.		
	Local.	Imported.	Total.	Local.	Imported.	Total.
Oxen	3,522	1,513	5,035	2,043	2,338	4,381
Buffaloes	1,379	2,528	3,907	339	1,978	2,317
Sheep	308	811	1,119	98	8,414	8,512
Goats	12,318	2,451	14,769	3,168	751	3,919
Swine	126,033	22,459	148,492	89,787	...	89,787

—	Negri Sembilan.			Pahang.		
	Local.	Imported.	Total.	Local.	Imported.	Total.
Oxen	542	1,915	2,457	319	541	860
Buffaloes	893	82	975	1,164	46	1,210
Sheep	392	1,204	1,596	145	...	145
Goats	1,364	130	1,494	2,192	...	2,192
Swine	36,168	1,460	37,628	26,720	104	26,824

NOTE.—In the above table the term "imported" means importation from outside the Federated Malay States.

The following table shows the percentages and values of locally produced and imported animals slaughtered:

—	Local.			Imported.			Total.	
	Number.	Percentage.	Value.	Number.	Percentage.	Value.	Number.	Value.
			$			$		$
Oxen ($40 each) ...	6,426	50.47	257,040	6,307	49.53	252,280	12,733	509,320
Buffaloes ($60 each) ...	3,775	44.9	226,500	4,634	55.1	278,040	8,409	504,540
Sheep ($5each) ...	943	8.31	4,715	10,429	91.69	52,145	11,372	56,860
Goats ($6 each) ...	19,042	85.11	114,252	3,332	14.89	19,992	22,374	134,244
Swine ($15 each) ...	278,708	92.0	4,180,620	24,023	8.0	360,345	302,731	4,540,965
Total ...	308,894	86.38	4,733,127	48,725	13.62	962,802	357,619	5,745,929

From these figures it can be seen that of the animals slaughtered those imported represent only 16.8 per cent. of the total. This must be considered as fairly satisfactory but it also indicates there is scope for further work especially regarding the production and marketing of oxen and buffaloes.

In all the large towns, and wherever possible elsewhere, all meat for human consumption is examined both ante-mortem and post-mortem. By this means a considerable quantity of unwholesome meat has been withheld from the public market.

ANIMAL HUSBANDRY.

Animal husbandry work continues throughout the States, its aim being to educate the people regarding proper methods of management and feeding of their animals and to bring about a desirable increase in the livestock population. This propaganda work is carried out by means of lectures, demonstrations and informal talks whenever possible, and at the organised livestock shows held in the various districts. This work has been considerably extended during the year, particularly by means of demonstrations which enable the aim of the talks to be more clearly understood by the livestock owners.

Fairly comprehensive surveys of the milk industry have been carried out, and in Selangor this has included observations on the Indian buffalo milk trade. These observations show that only a small margin of profit can be made by the dairymen and there is reason to believe that considerable adulteration of milk takes place. While this state of low profits exists it is most difficult to carry out successful propaganda work for the improvement of the hygienic condition of the trade which would entail additional expenditure by the dairymen. One other factor which considerably affects the economics of the trade is the necessarily high feeding costs consequent upon the lack of good grazing facilities. In most places dairymen are being encouraged to grow fodder grasses. This is meeting with some measure of success and should help to alleviate the feeding problem. An essential, of course, to improve the whole position is the production of a better type of milch cow.

Intensive propaganda for clean milk production has been carried out especially in Negri Sembilan. Milk samples for analysis were taken from the licensed dairies at Seremban and Port Dickson on each regular weekly or bi-weekly inspection. The results were explained to the dairymen who showed a keen interest. By the method of inducing the dairymen to boil all their utensils, using only boiled water for washing the udders, and generally employing elementary hygienic methods, it was found possible to have safe clean milk produced by the native dairymen.

A new Livestock Improvement Advisory Committee was formed in Negri Sembilan consequent upon the previous committee's report. This committee has formulated a policy for livestock improvement in the State and worked out details for its practical application. The policy involves the purchase of some 20 improved bulls which will be made available for service of the local dairymen's cattle and cattle kept by estate labourers. The policy entails also the earmarking and gradual supervision of grazing grounds together with the supervision of the whole question of animal management and livestock improvement in the State.

Considerable attention has been given to maintenance of buffaloes the aim being to encourage owners to make greater use of their animals. Milking and ghee making have been one of the chief lines of propaganda particularly with a view to improving the dietry of Malays. This is specially applicable to ghee (clarified butter) since owing to its method of production there is little risk of bacterial contamination in the finished product. Work on improved methods of manufacture of ghee, feeding of milking buffaloes, and selection of a milking strain of animal, has been carried out in Pahang.

Goat breeding societies commenced in Perak and Selangor have met with some measure of success but it is felt that more detailed attention to this work by an increased staff is necessary before there can be real improvement.

Swine rearing has received considerable attention. This industry is mainly in the hands of Chinese who have a very good understanding of the trade and generally speaking their methods of husbandry are well suited to the conditions and strain of pigs which they usually breed. There is now a considerable amount of European strain in the swine bred, this being more marked in some districts than others. To a great extent this introduction of European strain is consequent upon the depression of 1931 when a number of estates raised half-bred European pigs. Subsequently these herds were often sold off and found their way into the hands of the Chinese breeders who quickly appreciated their quick maturing qualities. It is just possible however that in-breeding with these animals will result in the raising of swine with certain inferior qualities. The introduction of fresh blood is necessary.

ANIMAL TRAFFIC.

Importation of animals from Southern Siam, which was reopened in September, 1936, was again closed in October, 1937, due to the presence of anthrax and rinderpest in that country. Importation of animals from the Netherlands Indies to the Federated Malay States was restricted in September, 1936, and imports were permitted only under special permit through Singapore and Penang after quarantine at these places or at the final destination. Animals were imported to the Federated Malay States from the Unfederated Malay States, Straits Settlements, Netherlands Indies, Siam, Australia, India and Britain.

The following table gives details of source of imported animals:

From.	Oxen.	Buffaloes.	Sheep.	Goats.	Swine.	Horses.	Dogs.
1 MALAYAN AREAS OUTSIDE F.M.S.							
Singapore	2,129	...	...	..	...	...	34
Malacca	73	66	1,204	100	1,460	...	8
Penang	39	6	7	48	197	...	4
Province Wellesley ...	114	51	...	73	16,813		
Kedah	328	1,752	...	38	5,449		
Perlis	190	102					
Johore	32	...	...	10	...	2	5
Kelantan	182	161	...	12			
Trengganu	610	160	...	1			
Total (Malayan) ...	3,697	2,298	1,211	282	23,919	2	51
2 OUTSIDE MALAYA.							
Netherlands Indies ...	2,388	280	...	3,082	104		
Siam	418	2,801					
Australia and New Zealand	13	...	8,514	...	...	12	
India	...	...	704				
United Kingdom... ...	...	...	...	...	...	14	31
Total ...	2,819	3,081	9,218	3,082	104	26	31
GRAND TOTAL ...	6,516	5,379	10,429	3,364	24,023	28	82

There is practically no export trade of livestock from the Federated Malay States but considerable inter-state traffic exists. Pahang exports a few buffaloes to Selangor and Negri Sembilan. This traffic should be developed if at all possible. In Selangor there appears to be a surplus of swine for slaughter and, as a result, exports to Pahang occur regularly.

DISEASES.

Foot-and-mouth disease occurred in Perak, Selangor and Negri Sembilan. In Perak, there were numerous outbreaks from January to October. A mild form was first reported in South Perak in January and due to difficulty of restriction of movement it spread northwards to North Perak. The actual cause of the spread was not definitely traced but goats were suspected. There were 1,042 cases, of which 28 died and 36 slaughtered. In Negri Sembilan, a small outbreak occurred at Seremban where 82 animals were affected but only two calves died. Also a small outbreak occurred in Bali cattle in the Quarantine Station. In Selangor, the infection appeared at Petaling, Klang, Sungei Besi, Pudu Ulu, Simpah, Cheras and Kuala Lumpur Quarantine Station. The strain of the causal virus appeared to be of low virulence and by facilitating its rapid spread in restricted areas amongst both goats and sheep the infection was soon eliminated. In this outbreak, 1,667 cases were reported, of which six young animals died. The disease also occurred in goats in Selangor and Perak and in both cases these animals were suspected of being the cause of further spread of infection.

Summarising the figures of reported cases and deaths in cattle throughout the Federated Malay States it shows that 2,791 cases occurred, of which 36 died and 36 were slaughtered. The numbers which died and were slaughtered represent 2.6 per cent. of the cases. This is fortunately low but such figures do not give any idea as to the economic loss to the owners of stock in affected areas. Foot-and-mouth disease usually has a low mortality rate but there is also considerable loss due to loss of condition and milk yield, and the general growth of the animals affected.

Two cases of hæmorrhagic septicæmia were reported from Perak.

Swine fever occurred in Perak near Taiping, Matang and Krian districts. At abattoirs where there is veterinary supervision thirty sporadic cases of so-called swine fever occurred, but inspection of sties whence the pigs came failed to reveal any further cases. The question of the wild pig being a source of infection is receiving attention in collaboration with the Game Department.

No case of rabies occurred during the year.

Investigation into the diseases locally known as Krian Sore and Puru Kambing (possibly nicrobacellosis of goats) were carried out in Perak.

An outbreak of tuberculosis in swine occurred in Selangor and was investigated. The infection occurred on only one estate no further spread being reported nor was there evidence of its occurrence amongst other pigs either in sties, or in swine carcases examined at the abattoirs.

Piroplasmosis was confirmed at Cameron Highlands in imported Australian cattle, and there were two deaths.

So far as is possible all deaths of animals, from whatever cause, are investigated. In this way a close watch is kept over the health of the livestock of the country and spread of any serious infection is controlled.

All outbreaks of poultry diseases are not reported. But no doubt there was considerable mortality amongst poultry of all ages and types due to an infection which resembles the so-called Newcastle Disease in Britain, and is referred to locally as diphtheritic-stomato-pharyngitis. The mortality rate in this disease may be as high as 100 per cent. Fowl-pox and general parasitism occurred, but with the usual methods of poultry husbandry employed prevention of introduction of such diseases was made very difficult.

FORESTS.

Reserved forests totalled 7,596 square miles at the end of the year, or 27.7 per cent. of the total land area of the Federated Malay States. The reservation programme has been practically completed in the western States, but a good deal has still to be done in Pahang. Some uneasiness has been felt in the department with regard to the permanence of some of these reserves owing to the claims of miners and others, and attention has been drawn to the desirability of long range planning and zoning to prevent money being unnecessarily spent on regeneration operations that cannot come to fruition, or reliance being placed on supplies that are doomed to destruction before they can be worked. This is becoming more and more necessary not only on account of the rapid dimunition of State land resources, but also because of the rapid expansion of the sawmill industry, which calls for a degree of security of tenure that cannot always be guaranteed.

During the year seven new sawmills were brought into operation bringing the total for the Federated Malay States to 34. Their actual outturn was 2,838,850 cubic feet or, for those who prefer it that way 56,777 cubic tons, a satisfactory figure considering that some of the mills only started working towards the end of the year. This industry has developed on healthy lines thus far and is capable of considerable expansion, thanks very largely to the pineapple trade, which absorbs considerable quantities of low-grade material in the shape of packing cases. The millers viewed with some concern, therefore, the invasion of this market by cheap Japanese plywood cases, of which only the ends are made of locally-cut boards representing less than one-fifth of the quantity used in the making of a wooden box of equal capacity. The modern tendency to judge a product by the appearance of the container is extraordinarily upsetting, and the agencies that persuade producers to use foreign substitutes render singular disservice to local industry. The one and a half million odd cases displaced by imported Japanese plywood during 1937 would have consumed 30,000 tons of boards against the 5,000 tons that were required to complete the latter, the difference of 25,000 tons being lost to the sawmill trade. However, the hostilities in China put a check to this competition, which had virtually ceased by the end of the year, though the advantage thus gained was offset by interference with the export of sawn timber to China and by closing of some of the pineapple canneries.

The supersession of hand-sawyers by sawmillers has necessitated alterations in silvicultural technique owing to the greater number of species that can be converted by the latter. The less amenable forms were hitherto taken out as firewood or, where no fuel market existed, were poisoned off to make room for regeneration of commercial species and allowed to rot *in situ*. This fuller utilization is, of course, all to the good, but it means that the rate and degree of exploitation must, to a very large extent, be allowed to follow the requirements of the sawmill and cannot be regulated to provide optimum conditions for regrowth. It is possible that the altered conditions may call for a certain amount of assistance in the shape of artificial regeneration, but the indications are that natural regeneration can be relied upon more often than not. Pre-treatment involving the removal of any considerable percentage of the crop was confined to areas rich in the more valuable primary hardwoods; elsewhere it was limited to the continuation of operations initiated in previous years. The total area still under such treatment at the end of the year was 79,226 acres in addition to 15,311 acres in which regeneration is complete.

The only minor forest product that calls for special mention is *jelutong*, the supply of which is inadequate to meet the requirements of the chewing-gum manufacturers. Local licensees and refiners maintained the high standards hitherto achieved and the market price rose in March to $60 per pikul, at which figure it remained throughout the year. This, naturally, encouraged collectors to tap trees hitherto regarded as inaccessible, though probably not to the extent that some of them—with an eye to yet greater profits—would like us to believe. The total outturn was 1,208 (1,179) tons which is not a significant increase in quantity, but the royalty (collected on a 10 per cent. *ad valorem* basis) rose from $59,938 to $164,105, or almost double the previous (1929) record. It is improbable that the yield can be increased for some time, and the best that we can hope to do is to maintain it round about the present figure until the young stock now being tended in regeneration operations can replace the unavoidable casualties among the older trees. There can be no doubt that this will follow in due course and that the ultimate supply will be increased and maintained, but as the trees do not yield until they have attained a considerable size and as the lower age classes are but poorly represented in untouched forest, there is likely to be a temporary falling off when existing reserves are exhausted. For this reason it is considered advisable to delay the further opening of reserves as long as possible, despite the high prices offering. Revenue on minor produce totalled $230,447 (122,597).

Outturn figures for major produce (with those of the previous year shown in brackets) in thousands of cubic feet were: timber 15,045 (11,318), firewood 9,851 (9,130) and charcoal 3,084 (1,186) representing an equivalent of approximately 31,971,000 (25,468,000) cubic feet of round timber excluding produce taken free by Malays. The increase in charcoal is not so great as would appear, owing to the adoption of a different conversion factor: nevertheless, the development of this industry was substantial and there are now 204 permanent beehive kilns operating in the Perak mangrove swamps and 32 in Selangor.

The Timber Purchase Section handled 670,425 (750,133) cubic feet of timber including 173,680 sleepers for the Railways. The latter figure includes 5,665 secondary hardwoods delivered at the Railways' own open-tank impregnation installation at Sentul, which was completed, but did not operate during the year. The total expenditure on purchases amounted to $605,825 ($708,960) and the net cost of the section was $16,642, or roughly 2.75 per cent. on the value of the timber inspected.

The financial results of the year's working were:

Revenue	$1,595,244	(1,212,078)
Expenditure	896,744	(782,795)
Surplus	698,500	(429,283)

the last being the highest since 1927. The apparent increase of nearly $114,000 under expenditure is explained by the inclusion of advances from the timber purchase imprest, which totalled $132,622 against only $44,688 in 1936, but as these advances are also included on the revenue side the surplus is not affected.

Investigations at the Forest Research Institute were directed as far as possible towards practical, as opposed to fundamental, issues. The temporary arrangement whereby an officer was detailed for duty as Silviculturist in the absence on leave of two specialist officers who could not be replaced in their respective spheres, was made permanent on their return to duty by the reduction of the grade of one duty post in the Dindings, thus increasing the scheduled headquarters staff by one at the expense of Perak.

At the end of the year the department was slightly below strength owing to unexpected casualties, one of which was made good by local recruitment. The number of gazetted officers remained as before at 40, of which 10 are attached to Federal posts at Headquarters or Research (including three specialist officers) 16 are in the Federated Malay States, two in the Straits Settlements and six in the Unfederated Malay States. Owing to the incidence of leave and casualties that could not be immediately replaced, the leave reserve was frequently inadequate and vacancies had to be filled by members of the locally recruited English-speaking staff, who acquitted themselves creditably.

FISHERIES.

Fishing throughout the Federated Malay States has been normal and prices have tended to increase. The bulk of the work of the Department has been directed towards an improvement in the methods of preserving the fish particularly at sea.

These improvements have been stimulated by the demand in Singapore for fresh fish caught by local fishermen, since the Chinese are disinclined to buy fish caught by Japanese.

The general improvement in the standard of living, wages, communications, mechanical refrigeration and the supply of ice has increased the demand for fresh fish throughout Malaya. With the exception of Singapore most other places are fairly well supplied from their local fishing grounds by local fishermen. Singapore although the largest fresh fish consuming centre in Malaya has only small local fishing grounds which are inadequate and must therefore depend on other sources.

These supplies are partially maintained by Japanese fishermen who bring in something like 50 per cent. of the daily requirements from places as far distant as Borneo, Siam, Burmah and various parts of the East Indian Archipelago.

A further 30 per cent., caught by Netherland East Indian Malays, is imported by local Chinese dealers from various parts of the Rhiow Archipelago.

The remaining 20 per cent. is caught either by local Singapore fishermen or Johore fishermen off the Johore Coast.

This is recognised as being unsatisfactory—particularly the dependence on so many non-Malayan fishermen, and funds have, therefore, been provided by the Straits Settlements Government to improve the position by the provision of a training school in addition to the experimental vessel which is now carrying out a useful programme of work in this direction. It is recognised that the Malay fishermen throughout Malaya have no funds and are not trained to undertake the more expensive methods of mechanised fishing.

It is believed, however, that with training and a careful selection of the type of man sufficient can be found and fitted to enter this field. The object of this school is therefore to train them in the use of power in boats, the handling and storage of fish at sea and ashore, the use and construction of all kinds of nets and gear and navigation to enable them to undertake voyages to distant fishing grounds. The period of training is expected to last two years and includes practical fishing at sea as well as shore training. Twenty-five or thirty carefully selected young fishermen of 20-22 years of age will be chosen.

In addition the school will provide instruction in the drying, salting, storage and canning of fish which will enable those engaged on this side of the industry to study more scientific methods if they wish to do so. Short courses will cover these requirements which can be attended daily.

Incidentally advantage will be taken of the opportunity to test under working conditions any improvements to the design, efficiency or preservation of nets and gear which may seem desirable.

The experimental vessel "Kembong" carried out a useful programme of work during the year, and, in addition to the main duty of functioning as a parent vessel to fleets of non-powered craft, carried out an organised search for areas other than those at present known for Kembong (Scomber).

The results were very successful and it is now known that this fish occurs over a wider area than was generally known.

Moreover the demonstrations of the value of a powered craft fitted with refrigeration have shown that it is possible to exploit these grounds.

Isolated attempts have been made in the past to market these fish fresh in various markets, but all have failed. The fish is exceptionally difficult to preserve and special refrigeration methods which were not then available are necessary to keep it more than a day in good condition.

The experimental work of the vessel "Kembong" has established that by the use of ice and storage at about freezing point, these fish will keep in excellent condition for five days. If stored at 15°F. they remained in good condition for one month.

Like all Mackerel, Kembong, although one of the most valuable food fishes, is extremely perishable and needs special treatment and its distribution must not be delayed once it leaves the refrigerated store. Unfortunately delay is the rule rather than the exception, and no attempt has yet been made by the dealers to improve matters. Kembong, however, is far too valuable a fish to the population of Malaya to be spoiled because no one cares to handle it properly, and the resources of the Fishery School will, therefore, be called in. The capture of this fish will be part of the training scheme and use will be made of the main refrigerated storage plant and subsidiary refrigerated chambers in convenient distributing centres where direct sales will be made.

It is hoped to establish in this way Kembong as one of the staple fishes in the local market. Its merits are that it is cheap and good.

In order to encourage the supply of fresh fish for Singapore the vessel "Kembong" operating as parent ship and refrigerated store to groups of Malay fishermen off Pahang, with their boats, was able to demonstrate the superiority of this method of fishing over their present methods. It was hoped that if the fishermen could be induced to remain at sea instead of returning daily, and handing over their catch directly it was taken to a refrigerated store not only would the fish realise a better price, but a greater amount could be taken by them and more money earned. At present they leave their homes in the early morning sailing out with the offshore wind and remaining on the grounds as long as possible. They return with the onshore wind which gets them home in the afternoon usually about 3 p.m.

Their catches lie in the boats ungutted and without any attempt being made to preserve them during the heat of the day for periods as long as six or seven hours and are generally in the earlier stages of decomposition when they arrive. The only method of preservation is by salting and drying, sometimes there is a small amount of ice for the larger and more valuable fishes, but even these have deteriorated.

This dependence on the wind also means that they must leave even if fishing is good, otherwise they may lose the returning wind and be compelled to paddle home perhaps a matter of many miles.

The results were encouraging although it will be some time before this method can be established as a regular thing.

The most successful methods of fishing proved to be handlining and drift netting.

The total amount of fish landed in the Federated Malay States as wet fish amounted to approximately 48,000 tons. Revenue from the issue of licences for boats and gear amounted to $16,715. The number of fishermen employed amounted to not less than 14,094 of whom 7,753 were Malays, 6,166 Chinese, 100 Indians and 75 Siamese.

The total number of fishing craft of all kinds employed amounted to 10,679.

Canning experiments were continued and a standard method of canning fish has been worked out as an alternative method of preserving fish. The adoption of canning as a means of preservation now depends on an agreement with the Health Authorities as to what supervision may be necessary.

The experimental work on the cultivation of fresh-water fish continues with a view to stocking the newly opened areas at Sungei Manik, Lower Perak, and the possible cultivation of fresh-water fish on a large scale as an industry.

Rainbow and Brown trout introduced into the Cameron Highlands continue to grow. Although they are old enough there is no evidence that they have yet spawned.

MANUFACTURES.

There are but few manufacturing concerns in the Federated Malay States. They include four aerated water factories, two match factories, seven distilleries, one plywood factory, three pineapple canning factories, one cement works, and a few tile and brick factories.

CHAPTER VII.

Commerce.

The aggregate declared value of the imports, exports and re-exports of the Federated Malay States with countries situated outside the Federation as compiled from declarations received at the Central Trade Registry during the year 1937 was $488,348,502 as against $343,742,286, an increase of $144,606,216 or 42 per cent.

The declared value of the imports has risen by over thirty-four million dollars and there is also an increase in the aggregate value of the exports of over 107 million dollars mainly due to the chief articles of export, viz., rubber, copra, tin and tin-ore and gold which represent over 95 per cent. of the export trade.

During 1937, the price of tin varied from $93.77 to $137.42 and averaged $119.89 per picul as against $100.44 per picul in 1936.

The price of rubber varied from 22.3 to 40.6 cents with an average of 31.5 cents per pound in 1937 as against 26.9 cents per pound in 1936.

The price of copra (sundried) varied from $4.90 to $9.33 per picul and the average price for the year 1937 was $6.48 as against $5.81 in 1936.

The total value of the imports, exports and re-exports, including bullion and parcel post for the last five years are as follows:

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1933	67,129,150	111,885,935	44,756,785
1934	84,731,059	202,725,341	117,994,282
1935	87,102,149	186,770,827	99,668,678
1936	96,796,795	246,945,491	150,148,696
1937	131,101,350	357,247,152	226,145,802

The favourable trade balance for 1937, resulting from the improvement in the prices of tin, rubber and copra, which have increased the value of the exports by over 104 million dollars may be considered extremely satisfactory.

The percentage distribution of the imports, exports and re-exports trade of the Federated Malay States for the last five years is as follows:

IMPORTS.

Countries from which imported.	1933.	1934.	1935.	1936.	1937.
Singapore	32.78	31.42	30.55	30.71	27.52
Penang	18.24	17.61	19.54	19.43	18.58
Malacca	2.36	2.00	2.20	1.99	1.85
Unfederated Malay States	2.73	2.28	2.34	1.96	2.12
United Kingdom	12.68	12.70	13.65	14.42	18.04
British Possessions	9.43	9.36	10.52	9.33	9.56
Continent of Europe	2.39	2.54	2.45	2.80	4.27
Siam	9.09	9.45	7.53	8.00	6.28
Netherland Indies	8.71	9.93	8.48	8.65	8.31
Other Foreign Countries	1.59	2.71	2.74	2.71	3.47
	100.00	100.00	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1933.	1934.	1935.	1936.	1937.
Singapore	25.94	23.12	24.18	24.59	23.53
Penang	27.06	28.08	33.13	35.03	35.01
Malacca	3.45	2.54	1.23	1.48	1.50
Unfederated Malay States	.87	.60	.49	.58	.80
United Kingdom	9.96	16.62	15.46	6.73	7.33
British Possessions ...	.92	1.14	1.75	2.25	2.17
United States of America	18.97	15.23	14.02	17.95	14.63
Other Foreign Countries ...	12.83	12.67	9.74	11.39	15.03
	100.00	100.00	100.00	100.00	100.00

PRINCIPAL IMPORTS (1937).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal sources of supply in order of importance.
Rice, all kinds	Tons	232,294	16,232,117	Siam, Burma, Penang, Malacca, Singapore and British India.
Milk, all kinds	Value	—	3,954,412	United Kingdom, Singapore, Penang, Holland and Australia.
Sugar, all kinds...	Tons	38,005	2,802,455	United Kingdom, Hongkong, Penang and Singapore.
Cigarettes	Lbs.	4,406,538	5,559,735	United Kingdom, Singapore and Penang.
Piece Goods	Yards	30,976,562	5,769,555	Singapore, Penang, United Kindom, British India and Japan.
Drugs and Medicines... ...	Value	—	1,375,807	Singapore, Penang, United Kingdom, Australia and China.
Petroleum	,,	—	18,771,857	Sumatra, Singapore, Penang and U.S.A
Motor Cars, Passenger and Commercial	Nos.	1,289	2,288,712	Singapore, United Kingdom and Penang.

PRINCIPAL EXPORTS (1937).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal countries of destination in order of importance.
Rubber	Tons	247,387	171,258,490	U.S.A., France, Penang, United Kingdom, Singapore, Germany, Italy, Malacca, Canada, Australia, Japan, Ceylon, Belgium, Hongkong, Sweden, China, Mexico, Argentine Republic and Denmark.
Copra	,,	88,915	9,530,347	Penang, Germany, United Kingdom, Holland, Singapore and Greece.
Tin and Tin-ore	,,	99,755	151,418,742	Penang, Singapore and U.S.A.
Gold	Value	—	1,469,401	Singapore and Penang.
Palm Oil	Tons	29,600	3,938,226	Singapore, Canada, U.S.A., United Kingdom, Egypt, Japan, Penang and South Africa.
Pineapples, canned	,,	15,329	1,839,829	United Kingdom, Canada, U.S.A. and Holland

PRINCIPAL IMPORTS (1936).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal sources of supply in order of importance.
Rice, all kinds	Tons	219,067	14,290,795	Siam, Burma, Penang, Malacca and Singapore.
Milk, all kinds	Value	—	3,166,728	Singapore, United Kingdom and Penang.
Sugar, all kinds...	Tons	31,758	2,140,536	Penang, United Kingdom, Hongkong and Singapore.
Cigarettes	Lbs.	3,274,388	4,679,534	United Kingdom, Singapore and Penang.
Piece Goods	Yards	23,169,245	3,888,582	Singapore, Penang, United Kingdom and Japan.
Drugs and Medicines... ...	Value	—	1,110,313	Singapore, Penang, United Kingdom and China.
Petroleum	,,	—	15,268,109	Sumatra. Singapore, Penang, Dutch Borneo and U.S.A.
Motor Cars, Passenger and Commercial	Nos.	690	1,280,483	Singapore, Penang and United Kingdom.

PRINCIPAL EXPORTS (1936).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal countries of destination in order of importance.
Rubber	Tons	182,873	110,150,715	U.S.A., France, Penang, United Kingdom, Singapore, Malacca, Canada, Germany, Japan, Italy, Ceylon, Australia, Hongkong, Spain, Belgium, China, South Africa and Argentine Republic.
Copra	,,	98,363	8,449,508	Penang, United Kingdom, Germany, Holland, Singapore and France.
Tin and Tin-ore	,,	85,611	109,430,652	Penang, Singapore and U.S.A.
Gold	Value	—	1,676,989	Singapore and Penang.
Palm Oil	Tons	21,412	2,878,607	Singapore, Canada, United Kingdom, Japan, Siam and British India.
Pineapples, canned	,,	12,169	1,589,840	United Kingdom, Canada, Germany and U.S.A.

IMPORTS OF COIN.

	Copper coin. $	Gold coin. $	Silver coin. $
1933	470 ...	— ...	6,000
1934	— ...	— ...	—
1935	— ...	— ...	4,500
1936	— ...	— ...	10,500
1937	330 ...	6,073 ...	19,000

RE-EXPORTS OF COIN.

	Copper coin.	Gold coin.	Silver coin.
	$	$	$
1933	—	—	68,554
1934	—	—	5,975
1935	16,000	—	40,000
1936	—	—	—
1937	—	—	—

The annual 1937 figures show a steady increase in the value of external trade both inward and outward, mainly attributable to the better business enjoyed. Owing to unsettled conditions in the Far East many cargoes were off-loaded for storage in Singapore and such of these as were imported into consumption in Malaya were included in the trade figures.

The foreign (external) trade of Malaya, representing the Colony of the Straits Settlements, the Federated and the Unfederated Malay States, in merchandise, bullion and specie and parcel post, amounted in value to $1,603 (£187) millions, as compared with $1,152 (£134) millions in 1936, an increase of 39.2 per cent. Imports increased by $185 millions or 36.0 per cent. and exports by $266 millions or 41.6 per cent. Increases in both the import and the export trade were spread over the majority of the principal products, the largest increases bring in the imports of rubber, motor spirit, tin-ore, cotton piece goods, machinery, liquid fuel, rice, motor cars, copra and cigarettes, and in the exports of rubber, tin, motor spirit, copra, tin-ore, arecanuts, palm oil and liquid fuel. There were, however, decreases in the imports of pepper and kerosene and in the exports of rice and kerosene. Exports of rubber increased by $181,347,000 and those of tin increased by $48,416,000.

The $1,603 millions of external trade consisted of imports $698 ($513) millions and exports $905 ($639) millions, the figures for 1936 being shown in brackets. The value of bunker coal, oil fuel, aviation spirit, and stores taken on board ships and aircraft on foreign trade routes for their own consumption amounted to $13 ($11) millions and if this is added to the excess of exports there was a favourable trade balance of $220 millions, as compared with a favourable balance on the same basis of $137 millions in 1936.

Of the $1,603 millions, representing the external trade of Malaya, $1,331 ($981) millions or 83 (85) per cent. indicate the direct foreign trade of the Straits Settlements, $207 ($133) millions or 13 (12) per cent. the direct foreign trade of the Federated Malay States and $65 ($38) millions or 4 (3) per cent. that of the Unfederated Malay States.

For the Federated Malay States, the total trade amounted to $488 millions as compared with $344 millions for the previous year, an increase of $144 millions or 41.9 per cent. as shown in the quarterly returns of the Customs Department. Of the $488 millions, $205 millions or 42 per cent. represented foreign trade, $277 millions or 57 per cent. trade with the Colony, and $6 millions or 1 per cent. trade with the Unfederated Malay States.

CHAPTER VIII.

Labour.

The Federated Malay States have in the past obtained their labour from three sources, China, India and Java. The Javanese supply is only an insignificant fraction of what it used to be and is now comparatively unimportant, because the expenses of recruitment are high and the Javanese labourer is not as healthy as the Chinese or Indian.

The main bulk of labour is distributed as follows:

	South Indians.	Chinese.	Javanese.	Others (including Malays and North Indians).
(A) Employed on estates ...	155,725	37,200	2,371	3,823
(B) Employed on mines ...	8,116	50,466	1,312	4,684
(C) Employed in factories ...	2,128	2,966	82	515
(D) Employed in Government departments	20,033	754	313	3,676

INDIAN IMMIGRATION AND EMIGRATION.

In 1937, 122,566 persons arrived in Malaya by B. I. steamers as deck passengers as against 43,191 in 1936 when assisted emigration was rigidly restricted. Assisted passengers (including minors and infants) totalled 54,849, of whom 28,000 adults were newcomers. Among those who paid their own passages were about 40,000 labourers, of whom 10,000 were newcomers to Malaya. Of those who landed at Port Swettenham, 37,234 were assisted passengers and 18,115 ordinary deck passengers.

The flowback from Malaya to India was 44,486 deck passengers as against 40,075 in 1936. Of these 34,211 adults (accompanied by 1,617 minors and 2,092 infants) paid their own fares, 6,397 adults (accompanied by 360 minors and 338 infants) being labourers proceeding on a short holiday to India.

Repatriates, including minors and infants, totalled 6,566.

The total Indian population in the Federated Malay States at the end of 1937 was estimated to be about 470,000.

Throughout 1937 there was a strong demand for labour from the mining and planting industries and all available evidence showed that it was unsatisfied at the end of the year, despite the large number assisted across from India and the large number who paid their own passages. From June on, a brake was applied to the assisted stream and towards the end of the year assistance was mainly confined to labourers or dependants rejoining their families or to labourers or dependants returning from a holiday in India, and notices were published in India to warn labourers against emigration without assured employment. The return flow to India was higher than in the previous years, this being a symptom of the improved prosperity as compared with 1936.

Indian labourers are mainly derived from the Madras Presidency and are tending to oust Chinese from estates. They have not, however, got the adaptability, self reliance and sturdiness of the Chinese and they need greater attention to enable them to become successfully acclimatized. Their habits and standards of living are, however, improving and they show much more adaptability than in former days and the number of those permanently settled in Malaya is high.

South Indian labourers are assisted to Malaya at the expense of the Indian Immigration Fund which is pan-Malayan in its operations. The basis of this fund is a payment by every employer (including Government Departments) on the day's work done by each of his South Indian labourers.

Labourers in India either present themselves at one of the two Malayan depôts in India—Negapatam or Avadi—where they are accepted if fit and possess a document from an employer guaranteeing them work in Malaya, or are recruited by licensed recruiters—kanganies—who are the agents of employers in Malaya. All recruiting is strictly controlled by the Malayan Labour Department and all accepted recruits must pass through one or other of the above-mentioned depôts, if they are to be assisted to Malaya. Recruiting is nowadays comparatively insignificant as a means of obtaining labour from India, though it is still essential in the case of new estates which have not yet built up a connection with villages in India or in the case of labourers who live too far from the depôts to defray railway fares. Non-recruited labourers may not be assisted to the depôts by any person who is not a relative, and they are at liberty on arrival in Malaya to work where they please. Recruited labourers are required to proceed to the employers in Malaya for whom they are recruited, but the only remedy for their disobedience is a civil one.

There is no public fund—such as the Indian Immigration Fund—to assist labourers of other than the South Indian races to emigrate to Malaya, and they pay their own fares. In former times Chinese contractors built up their Chinese labour forces by importing workers from China, the latter repaying the cost by instalments. This, however, is not the rule nowadays.

During 1937 the quota of Chinese deck passengers coming to Malaya for the first time was 4,000 during January, 5,000 for each of the next two months and thereafter 6,000 a month. In the application of the quota no distinction is made between labourers and non-labourers, but it is not operative in the case of females.

CONDITIONS OF EMPLOYMENT.

Housing.—In 1937 there was a big advance in the building of new lines and reconstruction of existing ones, all with a view to improved accommodation more suited to family life, and the provision of cottage types of housing increased in favour. Chinese formerly favoured communal housing with joint messing, but with the increased influx of women and the spread of family life they now tend to demand individual accommodation.

Water Supplies.—On large estates wholesome and adequate supplies of water are provided, and are usually piped to the lines. On smaller properties wells are the rule and the Health Department enforces the construction of linings and parapets to prevent pollution. The provision of proper supplies is compulsory under the Labour Code.

Sanitation.—The provision of latrines is enforced under the Labour Code. On large estates septic tank installations are spreading.

Workmen's compensation.—Appropriate legislation is in force and officers of the Chinese Protectorate and the Labour Department investigate all cases of accidents and take action on behalf of injured labourers or their dependants.

Hours of working.—The legal maximum working day is of 9 hours duration with not more than 6 hours at a stretch. In actual fact labourers are never required to work so long and on estates the average day is about 7 hours, with not more than 5 hours continuous work at a stretch. A labourer cannot be compelled to work more than 6 days a week.

Assistance to labourers in need of relief.—The Indian Immigration Fund maintains a home in Kuala Lumpur to which unemployable and unemployed South Indian labourers are admitted, and it pays for the transport of unemployed to places where work is available. In the case of Chinese labourers, the Chinese Protectorate maintains suitable institutions. Repatriation is given free to deserving cases.

Savings of and Postal remittances by labourers.—

(1) Details in respect of Chinese are not available.

(2) South Indian labourers:

(*a*) Deposits in the Post Office Savings Banks	$1,867,000
(*b*) Remittances to India...	Rs.3,112,500
(*c*) Membership of Co-operative Societies	$ 51,394
(*d*) Capital of Co-operative Societies ...	1,178,036
(*e*) Number of Co-operative Societies ...	243 as against 191 in 1936.

Labour disturbances.—There were in 1937 six major and eleven minor stoppages of work among South Indian labourers. All were quietly settled by officers of the Labour Department.

Chinese labourers both on mines and estates whether employed through contractors for labour or direct are usually paid by results. In Kajang district (Selangor) where European planters had learned to a great extent to supervise Chinese labour without contractors the new system for a time broke down because earnings did not rise with the rise in the price of rubber as rapidly as they had when contractors were employed. A widespread strike occurred which spread to Negri Sembilan. The strikers were orderly and obviously well organised. They displayed great loyalty to their organisation and once a settlement was reached they quickly resumed work and have continued to work well.

While the tappers were still on strike a sudden strike took place on the mine of the Malayan Collieries Limited. On this place of employment also changes were being made with a view to seeing that the men received adequate earnings. A long continued strike at the Collieries would have had serious consequences to the life of the whole Peninsula. All classes of the public had in the case of the tappers' strike shown themselves sympathetic with the workers. In the case of the coal workers the manner of the strike and the nature of the demands alienated all sympathy. The rank and file of the strikers were quick to realise this and when it was clear that Government was supporting the efforts made to resume working the men quickly resumed work on their old terms. The company continued its policy of increasing direct employment. It set up machinery to make sure that the labourers employed by contractors were receiving a fair share of the sums paid to contractors and the results so far obtained show that these efforts are appreciated and that direct employment of Chinese is possible on a larger scale than would have been thought possible a few years ago.

The above were the only strikes of a serious nature during the year.

General.

All labour is free and is landed free of debt and the only remedy for breach of agreement is a civil one.

On most estates one or more provision shops are maintained where labourers can purchase their immediate requirements, and the prices are supervised by the management and officers of the Labour Department. The competition of village shops, which labourers can visit quickly on bicycles, keeps prices reasonable in estate shops.

Standards of living among all labourers are improving yearly and the different races live and work together in harmony while they gain from experience of each other.

Rice is produced by indigenous Malays or immigrants of cognate races who have settled in the Peninsula. To the extensive irrigated area of Krian, Indian labourers migrate in harvesting time from neighbouring estates and receive payment in kind.

Market gardening and pig and poultry rearing are almost monopolised by Chinese, though Malays contribute eggs and poultry to the country's supplies, selling their products to Chinese middlemen. A considerable amount of local fruit is produced by Malay ra'ayat.

The Chinese also monopolise the building and skilled artisan trades, though North and South Indians also find employment in them. At bridge-and wharf-making and for pile driving, Malabaris (South Indians) are mostly in favour.

Tailoring, dress-making and cobbling are mainly in the hands of Chinese who are now ousting the North Indian from his former monopoly of ladies' dress-making.

Dhobying is shared by Chinese and South Indians.

Domestic servants are usually Chinese (Hainanese) or South Indians, though some Malays and Javanese are also employed, particularly as private motor-car drivers.

Chinese are in the great majority in mining, logging, the timber industry, as rickshaw pullers, and in felling and clearing jungle for plantations.

South Indians are in the great majority in Government and Municipal Departments and on European-owned estates.

Dairying is shared by North and South Indians.

In mining South Indians are employed on earth work, but they are being displaced by Sikhs in this line.

Javanese excel as drain cutters on estates.

No labourers are under contract in the Federated Malay States. Most Indians are employed directly, most Chinese are employed through contractors.

A striking fact during the past ten years has been the growth of family life among South Indians and Chinese who are tending more and more to make Malaya their permanent home. Mr. W. L. Blythe, M.C.S., made a survey during 1937 of the conditions of engagement and employment of Chinese and has drawn attention to the following important facts among Chinese labourers:

(*a*) The greater influx of Chinese women with their settling influence on the mode of life and the needs of Chinese labourers, and their demand for separate housing units as compared with the communal life of the bachelors or "grass-widowers" who sleep in big dormitories and are fed by contractors.

(*b*) The growing tendency of employers to engage and employ labourers directly instead of through contractors. New-comers are now generally assisted to Malaya by friends or relatives.

(*c*) The growth of Labour Unions.

The Controller of Labour, Malaya, who is an officer in Class IA of the Malayan Civil Service is responsible for all labour matters affecting every race. On the protective side the Labour Department concerns itself mainly with the enforcement of the Labour Code and various labour enactments. On the immigration side it is associated with the Indian Immigration Fund, from which are financed the housing and feeding of assisted emigrants in the large emigration depôts in India, their passages to Malaya, their quarantine and maintenance in depôts in Malaya, their transport to the various places of employment, their assistance when unemployed, and their repatriation to India when necessary. On the political side, the primary responsibility for negotiations with the Government of India rests with the Controller of Labour who receives reports on every relevant side of Indian life and affairs from his officers stationed in India. In matters affecting the Chinese labourers, the Chinese Protectorate works in collaboration with the Labour Department, the former's officers being invested with the necessary powers under the Labour Code.

Towards the end of the year a "Chinese Labour Advisory Committee" was set up to consider the problem of Chinese labour and its supply.

CHAPTER IX.

Wages and Cost of Living.

The average weighted index of commodity prices *in Singapore*, represented by 17 principal commodities (15 wholesale and 2 retail) increased by 17.7 per cent. as compared with 1936, due principally to increases in the prices of gambier, rattans, gum damar and sago flour. There were increases also in the annual average prices of tin, rubber, pepper, arecanuts, rice, palm oil, copra and coconut oil, as compared with corresponding prices for 1936. The prices of coffee, pineapples and tapioca declined while that of tea remained unchanged. The prices of tin and rubber increased appreciably during the first quarter, but fell rapidly during the latter part of the year; the annual average was higher than that for the previous year. The price of tin was £231 per ton at the beginning and £184 at the end of the year, the highest and lowest prices being £304 and £180, respectively. The price of rubber was 9 13/16 pence per lb. at the beginning and 7 pence at the end of the year, the highest and lowest being 13 5/16 pence and 6 11/16 pence, respectively. The following index numbers show changes in commodity values during the last five years (base, 1929 values =100):

1933.	**1934.**	**1935.**	**1936.**	**1937.**
45	63	64	73	86

There was a general increase in the cost of living for all commodities and the index numbers for the Asiatic, Eurasian and European standards given below show that costs in respect of all three standards are higher when compared with 1936 and 1914.

Standard.	**1914.**	**1936.**	**1937.**	**Percentage increase + or decrease − in 1937 as compared with 1936.**
Asiatic	100	106.0	112.5	+6.1
Eurasian	100	107.8	112.4	+4.3
European	100	124.0	127.1	+2.5

Although these figures do not accurately represent the average weighted commodity prices in the Federated Malay States, owing to the greater importance of commodities other than rubber and tin in Singapore as part of its entreport trade, it is an established fact that the trend in Singapore and that in the Federated Malay States follow each other with reasonable closeness. No separate figures for the Federated Malay States are available.

Since 1923 the Indian Immigration Committee has had the power to prescribe standard wages for South Indian labourers, such rates being based on a standard budget including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. In 1930 the following standard rates were fixed:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult able-bodied male.

32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult able-bodied male.

37 ,, ,, ,, female.

At the beginning of the year the rates of wages paid to Indians on all well-organized estates were not less than 45 cents a day for men and 36 cents for women. When the announcement was made that the export quota of rubber for the third and fourth quarters would be 90 per cent. the question of wages was at once considered by employers all over Malaya with the result that the United Planting Association of Malaya and the Rubber Growers' Association recommended an increase to 50 cents a day for men and 40 cents for women. These rates became current on the 1st April and are now the minima paid by Government departments.

Chinese labourers employed on estates are usually paid by results. Their earnings up to the end of March were about 50-60 cents a day and thereafter rates went up to 80-90 cents a day with a falling tendency towards the end of the year. Of the labourers employed on mines, about 80 per cent. are engaged on piece work and these earned between $15 and $18 a month plus food. Those employed on daily wages received from 65 cents to $1.20 a day but were not provided with free food.

The price of Rangoon rice, which is the staple article of diet for Indian labourers, fluctuated within narrow limits during the year—the Singapore prices in January, July and December being 26 cents, 26 cents and 27 cents, respectively. The average of the South Indian labourers' standard monthly budget in 1937 was $6.16 in January, $6.33 in July and $6.41 in December, as against $5.98 in January, $5.87 in July and $5.95 in December, 1936.

The index numbers of average monthly cost of foodstuffs in quantities representing diets at St. John's Island Quarantine Station, Singapore, were in respect of Chinese 92.8 for 1936 and 100 for 1937.

CHAPTER X.

Education.

A.—GENERAL.

The expenditure upon education (including $336,976 spent by the Public Works Department on the building and upkeep of schools) was $3,882,244. Of this sum, $443,538 was paid in grants to English aided schools, $99,702 in grants to Tamil vernacular schools and $158,345 in grants to Chinese vernacular schools. The total revenue amounted to $522,097 of which the sum of $227,456 represents the proceeds of the education rate, the remainder being derived from school fees and miscellaneous sources. The net expenditure on education was, therefore, $3,360,147.

Education facilities are provided in the Federated Malay States in English, Malay, Chinese and Tamil.

Schools are either Government, aided by Government, or private.

All schools (other than those in which the teaching is of an exclusively religious nature) in which ten or more persons are habitually taught in one or more classes, and all supervisors, committees of management and teachers of schools, must be registered in accordance with the Registration of Schools Enactment. In pursuance of the decentralisation policy of the Government the powers of the Federal Director and Assistant Directors of Education have been handed over to State officers who are now called Superintendents and Assistant Superintendents of Education.

B.—ENGLISH EDUCATION.

The "English Schools" are those in which English is the medium of instruction. Less than half of the pupils come from English-speaking homes. The lowest class may be composed of children speaking between them some seven or eight different languages or dialects, those speaking one language or dialect being generally quite unable to understand those speaking any of the others. In the circumstances the use of the "Direct Method" of teaching English is practically obligatory. Children are accepted into the lowest class at the age of six or seven and are given an education which ends as a rule with their presentation at the Cambridge School Certificate Examination, though a few stay on to enter for the Queen's Scholarship Examination.

The fees for pupils enrolled before the 1st January, 1934, are $30 (£3 10*s*.) a year for boys and $24 (£2 16*s*.) a year for girls for the first six years (i.e., for the years spent in the two Primary Classes and in Standards I to IV inclusive) and $48 (£5 12*s*.) a year for boys and $36 (£4 4*s*.) a year for girls for the remaining period. The rates for boys and girls enrolled on or after the 1st January, 1934, were fixed at $36 (£4 4*s*.) a year for the first eight years (i.e., up to and including Standard VI) and thereafter $72 (£8 8*s*.) or $108 (£12 12*s*.) a year, according to the results of an examination, the successful pupils up to 50 per cent. of the available places paying the lower fee and the remainder paying the higher one.

The fees have been reduced from 1st January, 1938, to $30 (£3 10*s*.) a year for Primary Classes up to Standard VI inclusive.

There is no compulsory education.

In 1937 there were 21 Government English schools for boys and 12 grant-in-aid English schools for boys and 13 for girls. The total average enrolments were 6,525, 4,756 and 5,018 respectively, a total decrease of 586 on the 1936 figures.

In 1936 there were 23 Government English schools for boys but two schools were closed in Perak at the end of 1936 as accommodation for their pupils was found in nearby Government schools. These were the Government English School, Kamunting, and the Maxwell School, Ipoh.

Of the 16,299 pupils in English schools at the end of the year, 2,788 (or 17.1 per cent.) were enjoying free education. The details of the nationalities so benefited were 230 Europeans and Eurasians, 1,685 Malays, 611 Chinese and 232 Indians while 30 belonged to other races.

The aided English schools are managed by various missionary bodies—the Christian Brothers, the Methodist Episcopal Mission, the Church of England, the Plymouth Brethren and the Sisters of the Holy Infant Jesus.

The Government pays to such schools monthly grants equal to the difference between their revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment and salaries in respect of European Missionary teachers at the rate of $3,000 (£350) a year for men missionaries and $1,800 (£210) a year for women missionaries. Allowances at these rates, however, are payable only to 16 per cent. of the total authorised staff in boys' schools and 25 per cent. of that in girls' schools. The other missionary teachers, European and Asiatic are paid at the rate of $1,440 (£168) a year for men and $1,200 (£140) a year for women. In Christian Brothers' Schools and Convent Schools no distinction is made between European and Asiatic Missionary teachers who are all paid at a flat rate of $2,400 (£280) a year for men and $1,500 (£175) a year for women. Under certain conditions capital grants amounting to half the cost of approved new buildings are also paid by the Government.

The Malay College, Kuala Kangsar, is a secondary school for the sons of the Malay Rulers and for other Malay youths of good family which in addition trained probationers for the Malay Administrative Service and for various Government departments. At the end of the year there were 125 students—43 from Perak, 25 from Selangor, 28 from Negri Sembilan, 17 from Pahang, 5 from Johore. The staff consisted of the Headmaster and two European and five Asiatic Assistant Masters. The health of the boys was satisfactory during the year. The Dental Surgeon, Perak, visited the school on one occasion. Ten out of ten candidates obtained the School Certificate and eight out of ten the Junior Certificate in the July Cambridge Examination. There were six Malay probationary officers (Administrative Branch) in residence at the College until the middle of August when they left and three new ones arrived. Cadet and scout activities are part of the school routine. The strength of the cadets was three officers and 54 other ranks; they were inspected by the Assistant Staff Officer of the Local Forces and received a good report. The average strength of the scouts was one officer (assisted by all local masters), 55 scouts and 20 tenderfeet. Football (Association), cricket or hockey are compulsory three times a week; on other days tennis, fives, badminton or an evening run are arranged; the usual Annual Athletic Sports were held. The total cost of running the College was $67,916 as compared with $59,612 in 1936; the fees collected amounted to $9,474 as compared with $8,561 in 1936.

There is no central college for the training of teachers for English schools. Teachers for elementary and secondary classes are now recruited from Raffles College and teachers for primary classes from Normal Classes which, when required, are held at centres in each of the States of Perak, Selangor and Negri Sembilan; in the State of Pahang correspondence classes take the place of Normal Classes. In 1937 there were two Normal Classes in the Federated Malay States—one in Selangor and the other in Perak. No correspondence classes were held in Pahang. A first year Primary Normal Class Examination for women teachers was held in Selangor in March, 1937, when 21 students out of 24 passed. These students entered the second year Normal Class in April, 1937. A first year Primary Normal Class was opened in Perak in April, 1937.

C.—Vocational and Industrial Education.

The Government Technical School, Kuala Lumpur, is the only institution in the country which offers full-time instruction in higher education of an engineering nature and accepts students from all parts of Malaya. It provides courses in Civil, Surveying, Mechanical, Electrical and Telecommunication Engineering and could more properly be described as a College of Engineering. The number of students under full-time instruction at the end of the session in May (the end of the school year) was 83, five more than in 1936, of whom 63 were apprentices from the Public Works, Drainage and Irrigation, Railways, Posts and Telegraphs and Survey Departments. Fourteen students completed their training during the year and 53 apprentices to Government departments were admitted to the new session in July together with twelve private (fee paying) students. The total number of students at the end of the year was 126 as compared with 91 at the end of the preceding year. Hostel accommodation proved totally inadequate and as a temporary measure a bungalow in Belfield Road was used as a supplementary hostel. In May, 52 students were in residence at the hostel and the number increased to 82 in December. The Technical School continued to function as an organising centre for the conduct of the City and Guilds of London Institute Examinations in

Malaya, exclusive of Singapore which is separately organised as a centre. The number of candidates who applied to sit for them in 1937 was 219 as compared with 157 in the preceding year. Special lectures by officers of the Posts and Telegraphs Department proved to be of great value. Classes in hygiene and first aid, conducted by the Medical Department, to which the school is grateful, were continued and were very popular. Discipline on the whole was good and attendance high. Additions were made to the library and equipment was increased by additions to the physics laboratory and to tools used in reinforced concrete. The Technical School Advisory Committee did not meet during the year. The expenditure from the Education Department and Clerical votes, exclusive of that on leave pay, pensions, etc., was $35,129 (excluding Crown Agents bills) and revenue was $25,357.

Commercial Education.—There were no purely commercial schools and no separate departments for purely commercial work in any of the schools.

Industrial Education.—There were three schools engaged in giving an industrial education—the Trade Schools at Kuala Lumpur and Ipoh, and that at Bagan Serai.

(*a*) The Trade School, Kuala Lumpur, admits boys from Selangor, Negri Sembilan and Pahang. The students do a three years' course, being trained to be fitters and motor mechanics and tailors. The number of students was 107—76 from Selangor, 22 from Negri Sembilan and nine from Pahang. Eighty-five were in the mechanics classes, the remaining 22 being in the tailoring classes. Thirty-eight mechanics completed their course in June and of these 36 obtained employment almost immediately. Thirty-seven new students were admitted in July. The number of new admissions to the tailoring class was six. Eighty-three of the boys reside in the Trade School Hostel at Maxwell School. The revenue amounted to $2,832.

(*b*) The Trade School, Ipoh, provides a general course in automobile engineering and a specialist course in the last year (3rd year). There were 75 students, of whom 57 or 76 per cent. were Malays. Twenty-three completed the three years' course in June. All have been found employment (including one student who failed to pass).

(*c*) The Trade School, Bagan Serai, provides a three years' course in carpentry. There were 38 students at the beginning of the year, but enrolment fell away somewhat with the result there were only 34 at the end of the year—seven in the 3rd year, 21 in the 2nd year and six in the first year. In order to encourage recruitment a new profit-sharing scheme was introduced in the latter part of the year. Under this scheme students receive 80 per cent. of the difference between the actual cost of materials and the selling price of articles made by them. The amount to the credit of each student is placed in the Post Office Savings Bank and will be surrendered to the student on his leaving school.

Evening classes in English were held as usual at the Maxwell School, Kuala Lumpur, most of the students attending them being boys from the Trade School or the Central Workshops. A class in précis-writing for members of the State Clerical Service was also conducted.

Evening science classes open to the general public were held at the Victoria Institution, Kuala Lumpur, the course followed being an outline of general science. Ninety-six boys from the Methodist Boys' School were accommodated in afternoon classes at the Victoria Institution and went through the same course.

D.—UNIVERSITY AND COLLEGIATE (POST-SECONDARY) EDUCATION.

The highest educational institutions in Malaya are the King Edward VII College of Medicine and Raffles College, both in Singapore. The course at the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom. Licentiates of the College are thus able to secure admission to the Colonial List of the Medical Register and to be registered as medical practitioners in any part of the British Dominions.

There is also a fully organised dental school in which a five years' course of training is given, the diploma in dental surgery entitling its holder to practise in Malaya.

There is a four years' course for a diploma in pharmacy, entitling the holder to register under the Registration of Pharmacists Ordinance and to hold a licence under the Poisons and Deleterious Drugs Ordinance, thereby enabling him to practise as a dispenser in Malaya.

Raffles College was opened in 1928 in order to place education of a University standard within the reach of all youths in British Malaya who were capable of profiting by it, and to meet an urgent need for qualified teachers for secondary classes. It provides three-year courses in arts and science, and diplomas are awarded to successful students. A fourth year education course for prospective teachers was started in 1937.

The College awards annually ten entrance scholarships of a value of $720 a year tenable for three years, and a limited number of second and third year exhibitions, not exceeding $500 a year in value, are available for students who show exceptional ability during their first or second years at College.

The annual examination for the Queen's Scholarships was held as usual in October. There were nine candidates for the open scholarship and two candidates for that confined to Malays. The scholarship open to all races was awarded to Chin Kim Hong of the King Edward VII School, Taiping, and that confined to Malays to Ismail bin Mohamed Ali of the Victoria Institution, Kuala Lumpur. The former proposes to study medicine while the latter will take up economics.

It has been decided to transfer the Queen's Scholarships from the schools to Raffles College and the College of Medicine from 1940. Regulations governing the award of the proposed scholarships and fellowships were drawn up during the year and approved by the unofficial members of the Federal Council. The object of these regulations is to give an opportunity to persons in Malaya with suitable qualifications to receive the best possible higher education and to fit themselves for a professional career by study in England after obtaining diplomas of the College of Medicine or Raffles College.

E.—Vernacular Education.

Malay Vernacular Schools.—Malay vernacular education is entirely free. School buildings (as a rule), quarters for staff, staff, equipment and books are all provided by Government.

The aim in these schools is (i) to give a general and practical education to those boys and girls who will not receive an English education and who will find employment in vocations like agriculture in which a knowledge of English is not essential, and (ii) to provide preliminary vernacular education for pupils who will later receive an English education.

In 1937 there were 483 schools for boys and 81 for girls with average enrolments of 45,169 and 5,989 respectively. The figures for 1936 were 472 schools for boys and 82 for girls with average enrolments of 42,945 and 5,635 respectively. The Malay teaching staff numbered 1,466 men teachers and 271 women teachers as against 1,375 men and 246 women in 1936. There were 9,677 girls in boys' schools in the four States as against 7,790 in 1936.

The school course normally lasts five years, during which period the pupils pass through five standards. In a few schools in Perak there exists a sixth standard. In no case is a boy allowed to stay more than two years in Standard V.

The subjects of the curriculum are reading and writing (in both the Arabic and the romanised script), composition, arithmetic, geography, Malay history, hygiene, drawing, physical training, basketry (or some other form or forms of handwork) and gardening.

In the Malay girls' schools all general subjects were taught, a shortened form of the syllabus in the boys' schools being attempted. In the Perak schools domestic science was taught, one whole day a week being given up to instruction in laundry, housecraft and cookery. Drill and practical hygiene figured as subjects on every school time-table.

Needlework was taught in all the girls' schools, and in boys' schools in which girls were numerous and to which women teachers had been appointed. The subject is still improving, if rather slowly in some schools. More care and attention is being given to details of finish and cleanliness. Owing to lack of facilities for adequate supervision in some of the out-of-the-way schools, however, the standard of work varies greatly in this as in most of the other subjects. The pupils are gradually being taught to supply their own materials. The crafts taught included weaving, the making of *mengkuang* (screw-pine) mats and baskets, lace-making and pottery. The weaving suffered from lack of definite skilled supervision; the teachers produce fabrics from time to time but the pupils do not appear to learn much and seldom follow the craft after leaving. Better work is done in *mengkuang* and basket-making, in which good progress was made. Raffia and paper weaving were taught in the lower standards of girls' schools.

Gardening was taught in most of the Malay schools, sometimes a rice-plot was cultivated instead. Regular visits were paid by officers of the Agricultural Deparment to practically all schools and the gardens benefited greatly from their supervision. Vegetables, fruits and basketry materials were grown. Awards are made annually to the best garden in each district. The teachers showed themselves keenly interested. The general standard of the gardens was creditable, especially as regards cleanliness; compounds also were for the most part well-kept and some reached a very high standard. Flowers are grown in all school gardens.

Sultan Idris Training College, Tanjong Malim.—At the end of the year there were 362 students, one Kedah Probationer Translator and two Probationer Malay Assistant Inspectors of Schools in residence. In addition there were four students taking a post-graduate course and four craft students. One hundred and nineteen students completed their three-year course. The total expenditure was $110,819 (as against $100,606 in 1936), towards which the Unfederated Malay States contributed $60,434 for their 163 students and two probationers.

The cost of the establishment is borne by the State of Perak in the first instance and is subsequently apportioned between the States of the Federation, the Straits Settlements and the Unfederated States. The amount paid by the Federated Malay States and Straits Settlements respectively is proportionate to the number of students from each while the Unfederated Malay States pay a fixed sum for each pupil.

The College provides the highest course in Malay vernacular education obtainable in the Peninsula, while attached to it is a Translation Bureau which not only prepares the text-books required in the schools but also translates into the vernacular and sees through the press a variety of novels and books of general interest. The total cost of this Bureau was $15,289 as against $14,152 in 1936.

The Federated Malay States Art Superintendent was on duty in the craft school during the year as well as supervising the College art and other handwork. The original school has been sub-divided into smaller schools each devoted to a single craft—textiles, pottery, silverwork, weaving and carpentry schools. Each student studies only one craft.

(*a*) *The Textile School.*—The Japanese technique known as Yuzen printing introduced towards the latter part of 1936 was developed to quite a high pitch. Some difficulties were experienced in preparing the materials locally; it proved impossible to obtain any further supplies from Shanghai. The success of this process depends on the correct preparation of the thickening and students succeeded after many trials in imitating the Chinese and Japanese product fairly successfully.

Genuine Javanese *batek* (wax printing with copper blocks and dyeing) was started towards the very end of 1937. A skilled block-maker and a printer were engaged to start off the work. Much interest has been aroused amongst the Malays by the introduction of this craft. The tools and materials necessary are of the cheapest and simplest and quite within reach of the pocket of a kampong dweller. Compared to machine printing it is a slow process, on the other hand no machine can imitate the peculiar qualities of a genuine handmade *batek* and there is no doubt that the average Malay discriminates when buying in favour of the genuine article, when his pocket will allow it.

(*b*) *The Pottery School.*—A new glaze was developed during the year. It is a lead glaze prepared from an ore found on a mine in Pahang. A glaze of this type is eminently suited to the condition of a rural pottery as the material is easily ground and requires only a low fire to melt it.

(*c*) *The Silverwork School.*—Towards the latter part of the year the College succeeded in engaging one of the old Kuala Kangsar silversmiths. His skill was rusted a little at first but he is now turning out articles of a high standard of craftmanship.

(*d*) *The Weaving School.*—There are three looms in regular use now. The yarn is dyed at the College in fast colours. The work was confined to sarong making in tabby or plain weaving in various colours. The finished work sold readily.

(*e*) *Minor Crafts.*—Carpentry is carried on in a small way. A branch of the carpentry class carried out minor repairs to furniture and painting of notice boards for the College grounds. Other trades carried on in this section—giving employment to several local people are: chick-making, book-binding, lamp-shade making and tailoring.

The Malay Women Teachers' Training College, Malacca, which was opened in 1935, had an enrolment of 24 students drawn from the Straits Settlements and Federated Malay States. The staff consisted of a Principal and Assistant, both Europeans, and two Malay Assistants one of whom had been in the College since the opening two years before, and the other a new Assistant from Penang. The health of the students was good and their behaviour was entirely satisfactory. Special instruction in hygiene was necessary during the year as is the case whenever a new group of students enter the College. An entirely new set of students entered the College in January and difficulty was experienced with writing. Examination results were, however, better than with the previous students. In all crafts the students showed ability, lace-making and weaving are the most popular. A certain number of sessions were devoted to "Normal" (instructional) training and each student gave criticism lessons. Badminton continued to be the principal game played, netball was also introduced. Both games are popular and the standard of play was high. A performance of "Bluebeard" was given during the year before an audience of Malay Women Teachers on a visit from Selangor. A tour of inspection was made by the Principal and the European Assistant during the year of students now teaching in Malay Girls' Schools who were favourably impressed with what they found.

Chinese Vernacular Schools.—The two Government Chinese Vernacular Primary Schools at Kuala Lumpur, namely, the Chinese Free School, Davidson Road, and the Chinese Free School, Sentul, continued to function satisfactorily. At the end of the year the former had a staff of one headmaster and seven teachers and an enrolment of 252 students, while the latter had one headmaster, two teachers and 83 students. Both schools accommodate both boys and girls and the education is free. The Davidson Road School is primarily for children of poor parents and the Sentul School for the children of Railway employees.

The number of Chinese schools receiving grants-in-aid in 1937 was 203, Perak having 107 as against 92 in 1936, Selangor 57 as against 51 in 1936, Negri Sembilan 25 and Pahang 14 as against 15 and 10 respectively in 1936. The total grants paid to these schools was $158,345 as against $115,922 in 1936.

The grants to Chinese vernacular schools are in two grades for primary schools, $10 (£1. 3*s*. 4*d*.), a year or $5 (11*s*. 8*d*.), a year for each pupil in average attendance. The grant system was extended in 1936 to Middle schools at the rate of $18 (£2. 2*s*.) a year or $12 (£1. 8*s*.) a year for each pupil in average attendance. In order to qualify for the higher grade, schools must teach English with reasonable efficiency and must employ for that purpose a teacher who holds the minimum qualification of a Junior Cambridge Certificate or a certificate recognised by the Adviser on Education as of equal value. In addition to these grants certain schools with Normal Classes receive a special grant of $25 (£2. 18*s*. 4*d*.) a year in respect of a limited number of pupils in their Normal Classes. This number is determined by the number who may be reasonably expected to be absorbed as teachers in the local schools.

There are three types of schools:

(i) those managed by properly constituted committees;

(ii) pseudo-public schools, i.e., schools organised by one or more teachers who choose their own "committee members";

(iii) private schools run by a teacher who relies on the school fees for his livelihood, these schools being usually small and old in type.

There are several free schools at which a nominal fee of 50 cents (1*s*. 2*d*.) a month is charged. The fees in other schools are usually round about $2 (4*s*. 8*d*.) a month.

In almost all the private schools the native dialects of the pupils are still used in teaching, but in the other schools Colloquial Mandarin is the almost universal language of instruction. English is taught in many of the large schools and in some of the smaller. The standard is very low, but attempts have been made to improve it by insisting on a minimum qualification of a Cambridge Junior Certificate from teachers engaged solely to teach English, and by having a standard curriculum drawn up for the guidance of teachers of English.

The primary course in Chinese schools normally occupies six years. The Government has little if any control over the fees charged, the hours of attendance, or the length of holidays in any except the aided schools. The usual school subjects are found in the curriculum.

There are 17 Chinese schools (9 in Perak, 4 in Selangor, 3 in Negri Sembilan and 1 in Pahang) which have developed beyond the primary stage and have secondary departments. The Senior Middle Department in the Confucian School, Kuala Lumpur, which was started in August, 1935, with an enrolment of 18 students, has now been converted into a Normal Class. Fees in Middle Schools are paid at the rate of about $3 to $4 a month. There were 804 boys attending these schools at the end of 1937.

Secondary vernacular education for Chinese girls was provided at one girls' school and six mixed schools in Perak, one girls' school and two mixed schools in Selangor, three mixed schools in Negri Sembilan and at one mixed school in Pahang. There were 280 girls attending these schools in 1937.

From January, 1936, Normal Classes for the training of teachers were started by two schools in Perak and two in Selangor. For grant-in-aid purposes, a total of 75 pupils was allowed for each State. The course is of four years after Upper Primary. The total enrolment at the end of the year was 125. The reduction is due to elimination of students who failed the terminal examination in June.

It is hoped that the Normal Classes will have the effect of improving the standard of teaching in the primary schools.

The third joint Straits Settlements and Federated Malay States inter-school examination for Chinese schools was held in December. There were 1,135 candidates from the schools in the Federated Malay States. One hundred and thirty-four schools were represented of which 116 were aided. The examination was for the graduating forms of the Junior Middle and Upper Primary Departments, and all public schools which had a participating class and which were at a convenient distance joined in the examination. There were four examination centres in Perak, four in Selangor, one in Negri Sembilan and two in Pahang. In the Junior Middle Section, 188 candidates took the examination and 62 or 32.97 per cent. passed. In the Upper Primary Section there were 909 candidates of whom 315 or 34.65 per cent. passed.

The results show considerable improvement over those of 1936 in the Junior Middle Section. But in the Upper Primary Section there is a slight drop which may be attributed to the failure of candidates at the Kuantan Centre (only two out of the 21 candidates passed). This was the first time schools in East Pahang took part in the examination. It is expected that next year their performance will reach the average.

The second annual Perak Chinese Inter-school sports were held on 29th and 30th May at the Chinese Town Hall ground, Ipoh. Sixty schools (including one private school) with 943 competitors took part, while the second annual Selangor Chinese Inter-school Sports were held on 20th and 21st August on the Victoria Institution ground. Sixty-two schools (including two private schools) with 921 competitors took part. The meetings were a success, and it is intended to make them annual events.

At the close of the year there were 456 registered Chinese schools with 1,606 registered teachers. The total enrolment was 39,700, of which 10,845 were girls. Compared with the previous year there is an increase of 35 schools, 244 teachers, 3,857 boys and 2,017 girls.

Tamil Vernacular Schools.—At the end of the year there were 13 Government vernacular schools as in 1936—eight in Perak, four in Selangor and one in Negri Sembilan. In addition there were 398 aided schools (as against 345 in 1936). There were 18,458 pupils in both Government and aided schools, a total increase of 2,772 pupils on the 1936 figures. There were also about 75 non-aided schools with about 900 pupils. Though co-education is not a policy, a number of girls attend boys schools. In 1937 there were 6,590 girls in the Government, aided and private boys' schools. In Perak there was one school exclusively for girls run by the Roman Catholic Missionaries.

No fees are charged in Government and Estate schools but in some of the schools run by private bodies the pupils pay. There is usually an arrangement in such schools whereby poor children pay little or nothing. Government schools and private aided schools generally produce better work than the average estate schools, but on estate where the labour force has been settled for years the standard of the work is as good as in town schools.

A Normal Class for Tamil teachers was started in Selangor in April with 45 students.

The total grant paid to aided Tamil schools in 1937 amounted to $99,702 as against $70,626 in 1936.

F.—RECREATION, MUSIC, ART AND DRAMA.

Recreation.—Every encouragement was given to pupils to participate in school games. In almost all English boys' schools the maximum amount of games and organised sports, normally of the "team" variety, is provided. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket is increasing in popularity. Football (Association), hockey, volley ball, basket ball, tennis and badminton are played at most schools. Rugby football is played and gymnastics taught at some of the bigger schools.

In all English girls' schools, as in boys' schools, drill and games are now compulsory. Some girls' schools play basket ball and have tennis and badminton courts.

Physical training reaches a high standard in Malay (vernacular) boys' schools, and association football, encouraged by inter-school competitions, is very popular.

Music.—Music is taught in all Convent schools and occasionally elsewhere. Singing is taught in the lower forms of all schools. Most schools have gramophones and a few have pianos. Cadet Corps and a few Scout Troops have their own bands.

Handwork and Art.—Handwork is taught under the supervision of trained European mistresses in the primary and elementary departments of English schools. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, clay and plasticine modelling, cardboard modelling, stick-laying, bead-stringing, paper flower making, raffia work and woodwork. All English girls' schools teach needlework; a very high standard is generally attained.

Drama.—The drama forms part of the English curriculum of all English schools. The lower standards act simple plays and dramatic stories. The senior boys and girls perform scenes from Shakespeare.

The outstanding event of the year was the celebration in connection with the Coronation of His Majesty the King. Most school buildings were handsomely decorated. Parades of Cadets, Scouts and school boys were held. Coronation medals for boys, brooch buttons for girls and flags to all school children were distributed. They were all entertained in their respective schools and the loyal address of Their Highnesses the Rulers of the Federated Malay States to His Majesty the King was read in all schools. All had opportunities of witnessing the various illuminations and processions, and much appreciated the efforts to make the Coronation a happy and memorable occasion for them.

CHAPTER XI.

Communications and Transport.

POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

Posts.—During 1937 there were 104 post offices staffed by officers of the Department providing full postal facilities, whilst there were 74 postal agencies, where officers of the Customs Department, Railway Station-masters or others acted as postal agents, and limited services were available. The number of persons licensed to sell stamps was 170.

The following post offices and postal agencies were (*a*) opened or (*b*) closed during the year:

(*a*) Opened for business.

Name.	State.	Status.	Date opened.
Sungei Pelek	Selangor	Postal Agency	1- 1-37
Slim River...	Perak ...	Post Office	1- 1-37
Trolak	Perak ...	Postal Agency	1- 1-37
Bukit Rotan...	Selangor	Post Office	1- 1-37
Batu Kurau	Perak ...	Postal Agency	22- 3-37
Pasir Salak	Perak ...	Postal Agency	18- 5-37
Batu Arang	Selangor	Post Office	3- 8-37
Chenderiang	Perak ...	Post Office	1-10-37

(*b*) Closed.

Name.	State.	Status.	Date closed.
Slim River	Perak ...	Postal Agency	1- 1-37
Trolak	Perak ...	Post Office	1- 1-37
Telok Anson Wharf ...	Perak ...	Postal Agency	16- 5-37
Batu Arang	Selangor	Postal Agency	2- 8-37
Chenderiang	Perak ...	Postal Agency	1-10-37

It was decided that, as from the 4th June, the experimental postal agency which was opened at Kampong Chenor, Pahang, on the 2nd November, 1936, should be made permanent.

At the close of the year 316 posting boxes were in use, in addition to those available at post offices and postal agencies.

There were in force 244 licences for the collection of letters for despatch to China under the Clubbed Packet System.

Consequent upon the separation of Burma from India direct money order and parcel mail services between Malaya and Burma were instituted with effect from the 1st April and 23rd July respectively. The telegraph money order service was extended to Labuan as from the 1st July. Direct parcel mails between Malaya and Germany and between Malaya and the Netherlands (Holland) were established on the 18th March and 16th July respectively. The inclusion in the Malayan Internal Money Order System of Brunei took effect from the 1st of September.

Owing to irregular sailings between Malaya and China consequent on the internal disturbances in China the insured letter and insured parcel services were suspended.

The establishment of the Pan-American Airways Service between the United States of America and the Philippine Islands made possible the transmission by air of correspondence for Guam, Honolulu and the United States. Mails were conveyed by the Imperial Air Service to Hong Kong, by surface transport to Manila and thence by the Pan-American Air Service to San Francisco. The service was extended on the 24th April to Hong Kong thus providing a direct air link to San Francisco through the Imperial Airways' Service to Hong Kong and thence by the Pan-American Service.

An inland mail service was introduced on the 28th of June by means of Messrs. Wearne Brothers' thrice-weekly air service connecting Singapore, Kuala Lumpur and Penang. This service commenced to operate daily (except Sundays) on and after the 25th September.

The volume of air mail correspondence from Malaya to Great Britain conveyed by the Imperial Airways' Services increased steadily, the average weekly weight rising from 437 lbs. in January to 468 lbs. in November. As usual the mails despatched in December, carrying as they did the Christmas' and New Year's traffic, were the heaviest in the year, the total weight of the three despatches made up during the period ending 19th December being 2,006 lbs. as compared with 1,616 lbs. during the corresponding period in 1936.

Although it was anticipated that the Empire Air Mail Scheme providing for the carriage by air of all first class mail matter (letters and postcards) to and from most of the countries within the British Empire would be extended to Malaya during 1937 it was found necessary to postpone its introduction to the early part of 1938.

Money Orders.—Money Order business is transacted at all Post Offices and at certain Postal Agencies and during the year 350,097 money orders to the value of $18,120,857 were issued and paid, representing an increase of 39,860 in number and $4,278,740 in value over the 1936 figures.

Telegraph Money Orders included in the main 1937 total amounted to 21,628 in number and $2,528,613 in value.

Savings Bank.—The number of depositors in the Federated Malay States Government Savings Bank on the 31st December, 1937, was 91,809 as compared with 76,759 on the 31st December, 1936, representing an increase of 20 per cent. During the year 24,130 new accounts were opened while 9,080 accounts were closed.

The amount standing to the credit of depositors on the 31st December, 1937, was $12,098,272 as compared with $8,939,223 on the 31st December, 1936. The average amount to the credit of each depositor was $132 as compared with an average of $116 per depositor in 1936.

There were 48,377 withdrawals on demand during the year as against 48,196 in 1936 and 477 withdrawals by telegraph as compared with 374 in 1936.

Telegraphs.—There are 104 postal telegraph offices in the Federated Malay States.

The number of telegrams sent and received in the course of the year was 457,051 representing an increase of approximately 16 per cent. over the 1936 figures.

The value of telegraph business, including Government Messages sent free of charge, increased from $189,894 in 1936 to $231,712 in 1937—an increase of approximately 22 per cent.

The number of Inland Greetings Telegrams dealt with during the year was as follows:

Christmas and New Year	1,176
Chinese New Year	218
Hari Raya Puasa	252
Deepavali	142
Hindu New Year	40

The foreign Night Letter Telegrams service, introduced in 1936, which formerly operated only between Malaya and Great Britain, Northern Ireland, Irish Free State and Hong Kong was extended during the year to include all British Empire Countries except India, Burma and Australia.

Satisfactory teleprinter (telegraph) working was maintained on the main telegraph circuits throughout the year and, in continuation of the policy to eliminate morse working, the Kuala Lumpur-Seremban morse circuit was replaced by a teleprinter circuit.

The Bagan Datoh-Telok Anson morse circuit was converted to Telephone-Telegram working.

Railway Telegraphs and Allied Services.—The Federated Malay States Railways' telegraphs, control telephones, block and tablet signalling and other miscellaneous apparatus were satisfactorily maintained throughout the year in accordance with the terms of the Federated Malay States Railways Agreement No. 1502/33.

The Federated Malay States Railways' telephone exchanges at Ipoh, Seremban and Gemas were closed on the 1st January, 1937, and all railway subscribers cut over to Posts and Telegraphs departmental public exchanges on that date in accordance with the terms of an addendum to an agreement dated the 7th December, 1935, between the General Manager, Federated Malay States Railways and the Director-General, Posts and Telegraphs Department.

Works carried out during the year included the replacement of decayed wooden poles in Perak by rail poles, minor alterations to the alignment of poles at several places owing to local requirements, raising of wires due to bridge construction and the provision and shifting of minor items of railway plant and apparatus as requested by the Railway Department.

(i) DEVELOPMENT.

Telephones.—The number of telephones in service continues to increase and at the end of the year under review a record total of 5,198 direct exchange lines were connected to the Federated Malay States telephone system as compared with 4,619 at the end of 1936. The total number of telephone instruments installed was 7,797 and other miscellaneous circuits numbered 676.

The nett revenue derived from telephones during the year was $1,322,098 an increase of $283,860 as compared with 1936. Included in the 1937 revenue figure above is $576,639 derived from trunk and junction services, representing an increase of $126,290 over the previous year.

(ii) TYPES OF TELEPHONE EXCHANGES.

The Posts and Telegraphs Department now maintains 86 telephone exchanges for public service. There are three general types namely:

(*a*) Fifty-six Manual Exchanges. All switching at these exchanges is performed by operators.

(*b*) Twenty Full Automatic Exchanges. Subscribers connected to these Exchanges obtain their own local connections by dialling, and have access to an operator (usually at a remote exchange) for trunk and junction calls.

(*c*) Ten Semi-Automatic Exchanges. Connections on these exchanges are set up by an operator at a remote exchange, to which the apparatus routes all calls.

(iii).—New Exchanges, Extensions and Conversions.

During the year two new telephone exchanges, a full automatic exchange at Ayer Tawar, Perak, and a semi-automatic exchange at Jerantut, Pahang, were opened. Two Exchanges (at Sungei Siput, Perak and Batang Malaka, Negri Sembilan) were converted to full automatic working. Lumut, Bidor and Cameron Highlands, all in Perak, were extended to provide for increased traffic.

(iv).—Replacement of Seremban Exchange.

The new common-battery exchange for Seremban, which was mentioned in last year's report, was successfully taken into service on 2nd April, 1937. Dehydration facilities were provided in the building.

(v).—Trunk and Junction Development.

Owing to the opening of the new exchanges mentioned above, and to general increase of traffic it was necessary to provide the following trunk and junction circuits during the year:

Kuala Lumpur-Singapore	1	channel
Ayer Tawar-Sitiawan	2	channels
Bagan Datoh-Telok Anson	2	,,
Slim River-Kuala Kubu	1	channel
Telok Anson-Tapah	1	,,
Kampar-Malim Nawar	1	,,
Ipoh-Chemor	1	,,
Ipoh-Batu Gajah	1	,,
Ipoh-Menglembu	1	,,
Raub-Kuala Lipis	1	,,
Tampin-Segamat	1	,,
Kuala Lipis-Jerantut	1	,,

The following channels were withdrawn from service for traffic reasons:

Kuala Lumpur-Ipoh	1 channel
Slim River-Tanjong Malim	1 ,,

(vi).—RADIO TELEPHONE SERVICES.

Radio telephone facilities were greatly improved by the addition early in the year of services with South Sumatra and Indo-China, by the extension of hours of service on the more important links and by the opening on 1st December, 1937, of a service with most European Countries. The charge for a three minute call to Great Britain is $45. During the Christmas and New Year season this charge was reduced by half and the resulting traffic, which was heavier than could conveniently be dealt with, demonstrated the popularity of this relatively cheap service.

(vii).—TELEPHONE ACCOUNTING.

As mentioned in last year's report a new telephone accounting scheme was introduced throughout the Posts and Telegraphs Department at the beginning of the year. Accounts are centralised in Kuala Lumpur, where mechanical aids can deal with all routine work expeditiously and economically. The chief benefits of the scheme from the subscriber's point of view are:

(*a*) that all payments can be made on a monthly basis, a great convenience for the small business user, and

(*b*) that "phonograms" may be originated by any subscriber and charged to his monthly telephone bill, without the necessity for a separate telegraph deposit account.

Wireless.—The wireless stations in Selangor, Pahang and Perak operated efficiently throughout the year, the number of telegraph messages dealt with being 58,140 compared with 54,800 in 1936.

Apart from fixed point services the Petaling Hill Station continued to operate as an aeronautical ground station for the exchange of traffic between neighbouring aerodromes and aircraft in flight.

A Radio telephone service with Saigon was opened on 4th January and on 1st December, after protracted tests, Malaya, was linked with Europe through the Bandoeng-Amsterdam radio telephone channel.

The Malayan Amateur Radio Society continued to broadcast on three days each week, using the Petaling Hill Station.

The number of Broadcast Listening Station Licences in force at the end of the year was 3,850 as compared with 2,459 at the end of 1936. This represents an increase of 56.5 per cent.

The number of licensed wireless dealers at the end of the year was 54.

Financial.—The net revenue collected during 1937 by the Posts and Telegraphs Department in the Federated Malay States was $3,434,966. This is an increase of $405,974 as compared with the corresponding figure in 1936 (with Federal Reimbursement included).

Annually recurrent charges including Personal Emoluments amounted to $2,478,588 against $2,395,972 in the previous year, an increase of $82,616. In addition the expenditure on Children's Allowance amounted to $16,507. Special expenditure amounted to $383,912 as compared with a total special and loan expenditure in 1936 of $398,858, a decrease of $14,946.

These revenue and expenditure figures do not include the value of services rendered free of charge by the Posts and Telegraphs Department.

RAILWAYS.

The Railways of Malaya, which are such a vital factor in the communications of this country, are owned by the Federated Malay States Government, except for the portion in Johore which is held on lease from that State.

Starting in the south at Singapore, and crossing the Straits of Johore to the mainland on a causeway which also carries a road, the line continues through the State of Johore passing through large areas of jungle alternating with pineapple, rubber and oil-palm plantations until at the 137th mile from Singapore it enters the Federated Malay States territory at Gemas in the State of Negri Sembilan.

From Gemas one line runs north through a very interesting country of wonderful forests, fast flowing rivers and great mountains until eventually it reaches Tumpat, a port on the China Sea in the Unfederated State of Kelantan. A small branch line breaks off at Pasir Mas and runs to Sungei Golok on the Siamese border which is connected by rail with Bangkok, the capital of Siam.

The main line from Singapore to Penang runs west and north from Gemas, leaving the well-known historical town of Malacca on its left and onwards through Seremban to Kuala Lumpur, the Federal Capital—a real Garden City. From this point various lines radiate, the main one to the north passing through Ipoh, the surrounding district of which is the richest tin-bearing area in the world, and then on through Taiping to Prai, the port opposite Penang Island. A few miles south of Prai another line deviates to the Siamese border, passing through the Unfederated States of Kedah and Perlis. At the border station Padang Besar, connection is made with the Royal State Railways of Siam, and it is over this line that the express trains run from Penang to Bangkok.

Journeys are made as comfortable as in any other part of the world by the provision of restaurant cars, modern and tastefully decorated buffet cars incorporating the latest ideas in seating accommodation, air-conditioned first class coaches and commodious and well-appointed sleeping saloons.

By various branch lines the main line is connected to ports on the west coast of the country, the chief of which is Port Swettenham in the State of Selangor which has been transformed from an area of mangrove swamps and muddy rivers into a thriving port where ocean steamers can come alongside the well-equipped wharves.

In common with many railways throughout the world the Federated Malay States Railways have been faced with intense competition from road traffic and have built up a system of road distribution from all important stations, in addition to which they have connected up many outlying districts to the railway by means of regular road transport. Services by motor cars to and from the hill stations in Malaya are operated by the railway in conjunction with their train services.

Below are given certain statistics regarding the Federated Malay States Railways and the traffic handled:

MILEAGES, MAIN LINES AND BRANCHES.

	Miles.
Singapore-Prai	488
Gemas-Tumpat	328
Pasir Mas-Sungei Golok	13
Tampin-Malacca	21
Seremban-Port Dickson	25
Sungei Besi-Sultan Street	8
Sultan Street-Ampang	6
Kuala Lumpur-Port Swettenham	27
Kuala Lumpur-Batu Caves	8
Kuang-Batang Berjuntai	14
Tapah Road-Teluk Anson	18
Ipoh-Tronoh	15
Taiping-Port Weld	8
Bukit Mertajam-Padang Besar	99
Padang Besar-Bangkok (Royal State Railways of Siam)	615

LENGTH OF LINE (FIRST TRACK).

In the Federated Malay States	614
In the Straits Settlements	98
In the Unfederated Malay States	356
	1,068

Item.	1937.	1936.	1935.
Length of line (first track) miles	1,068	1,068	1,068
Gauge	Metre	Metre	Metre
No. of permanent stations	214	213	213
No. of flag stations	83	80	77

Item.	1937. $	1936. $	1935. $
Expenditure on Capital Account on 31st December	227,600,393	227,379,154	235,249,526
From Loan Funds	50,038,652	50,036,123	49,834,323
From Revenue Advances	114,178,957	113,936,593	113,934,122
From Railway Revenue	63,383,084	63,406,438	71,481,081
Gross Receipts	16,812,650	13,086,733	11,871,097

Item.	1937. $	1936. $	1935. $
Expenditure chargeable to Revenue Account (excluding Renewals Fund Contribution)	11,811,458	10,312,376	10,097,340
Contribution to Renewals Fund	2,086,506	1,927,045	1,773,757
Expenditure on Capital Account	248,025	220,363	99,270
Expenditure from Renewals Fund	1,185,195	771,179	737,683
Balance of Renewals Fund on 31st December	16,233,249	11,676,571	8,514,237
Receipts from passenger train traffic	5,611,870	4,423,840	4,431,386
No. of passengers (exclusive of season tickets)	8,827,898	6,877,055	6,137,540
No. of season tickets	13,503	12,106	11,429
Receipts from goods train traffic	8,432,671	6,470,430	5,269,786
Tons conveyed :			
(*a*) Revenue Earning	2,146,708	1,666,631	1,302,465
(*b*) Departmental	255,229	236,608	210,689
Receipts from road motor collection and delivery services	247,036	190,077	160,148
Receipts from miscellaneous services (rents, docks, ferries, etc.)	2,521,073	2,002,386	2,009,777
No. of ocean steamers dealt with at Port Swettenham	1,094	1,027	971

ROADS.

The road system of the Federated Malay States comprises a total of 4,558 miles, of which 2,939 are metalled and gravelled. Of the metalled roads 2,183 miles or 74.28 per cent. are bituminously treated. On the maintenance of this system $2,447,710 was spent, or $833 per mile.

Comparative figures are:

1928 ... $1,483 per mile of metalled and gravelled road
1934 ... 566 ,, ,, ,,
1935 ... 691 ,, ,, ,,
1936 ... 715 ,, ,, ,,

The 1934 cost at least was below the minimum required satisfactorily to maintain the roads and for some years to come it will be necessary to face increased expenditure in order to make good the arrears of maintenance of the "slump" period.

The standards of all the roads are high for a Colonial dependency, and improvements for the purpose of alignment and driving comfort are constantly in progress. Timber bridges, a relic of the developmental period when it was economical to provide them but now a source of expense and annoyance, are constantly being replaced by structures of concrete and steel.

Surveys are in hand for further extensions to the system, especially in areas still undeveloped perhaps on account of lack of communications.

SHIPPING.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during the last three years were as follows:

	No. of vessels.	Tons.
1935	2,865	6,650,985
1936	2,961	6,944,778
1937	2,960	7,234,376

The number and tonnage of ocean-going steamers entered and cleared at this port were as follows:

	No. of vessels.	Tons.
1935	1,945	6,165,547
1936	2,053	6,481,844
1937	2,186	6,809,896

The following table shows the nationality, number and tonnage of ocean-going merchant vessels entered and cleared at Port Swettenham during 1937:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American	12	44,298	11	40,848	23	85,146
British	1,072	2,603,260	1,072	2,604,761	2,144	5,208,021
Chinese	10	13,581	10	13,581	20	27,162
Danish	42	163,022	42	163,022	84	326,044
Dutch	145	334,058	145	334,058	290	668,116
French	2	2,263	2	2,263	4	4,526
German	49	216,745	49	216,745	98	433,490
Hungarian	1	1,509	1	1,509	2	3,018
Japanese	26	106,830	26	106,830	52	213,660
Norweigian	109	119,386	108	118,625	217	238,011
Panamanian	1	1,179	1	1,179	2	2,358
Siamese	10	6,601	10	6,601	20	13,202
Swedish	2	5,811	2	5,811	4	11,622
	1,481	3,618,543	1,479	3,615,833	2,960	7,234,376

A reduction of 5 per cent. on all pilotage fees was in effect from 1st January, 1937, to 31st May, 1937, and this was further reduced to 2½ per cent. for the pilotage district of Port Swettenham.

The number of ocean-going steamers which came alongside the wharf was 447 against 380 in the previous year.

The largest vessel entering the port of Port Swettenham during the year was the Blue Funnel s.s. "Philoctetes" of 11,466 tons.

The vessel with the deepest draught was the Blue Funnel s.s. "Achilles" drawing 31′ 1″.

A number of Southampton flying boats of the Royal Air Force visited the port during the year.

H.M.S. "Defender", "Olympus" and "Falmouth" visited the port during the year.

S.S.R.N.V.R. Patrol launches "Panglima" and "Pahlawan" also visited the port during the year.

AIR SERVICES.

Perak.—The aeroplane landing ground, Taiping, continues in very good condition and was used by 216 aircraft during the year compared with 220 during 1936. It was maintained at a cost of $4,438. Additional sub-soil drains 2,100 feet long were laid during the year at the north-east side of the ground to improve the bearing capacity, and a ten-roomed barrack to house the labour force was built, together with quarters for a resident sub-overseer.

The emergency landing ground at Simpang Ampat (Sitiawan), actual construction on which was completed towards the end of 1936, was opened during the year to craft weighing up to 6,000 pounds; the cost of maintenance being $4,921. The ground continues in good condition and most of the sparsely grassed areas are now satisfactory. Seventy-six planes made use of the ground in 1937.

The Ipoh landing ground remained open only for craft up to 2,500 pounds and $5,000 was spent on maintenance proper. Certain pothole subsidences first manifested in 1936 continued to be experienced during 1937 and exploratory measures were taken to determine the cause. After some trouble, definite water-courses some 10 to 11 feet underground were located at the north-east corner and these are probably a major contributory cause of the trouble. A puddle cut-off trench was constructed, and an open interceptor drain provided at sufficient depth to relieve the water pressure. It is too early to say definitely if the desired object has been achieved but it is hoped that marked improvement will result.

A small meteorological station was erected at this ground during the year which it is hoped will facilitate the dissemination of weather reports.

The Perak Flying Club which uses the ground as a base of operations continued to make satisfactory progress during the year and is now a well established body.

SELANGOR.

Kuala Lumpur.—A sum of $2,400 was spent on maintenance of this aerodrome. Further extension to the ground was completed at a cost of $12,000. This extension now carries a good growth of grass and was ready for testing at the end of the year. When brought into use the size of the landing ground will be 840 yards × 195 yards. In addition a good many improvements were made to the drainage system.

From the month of June Messrs. Wearne's Air Services Ltd. started an alternative day service of passenger and mail-carrying aeroplanes from Singapore to Penang and back, calling at Kuala Lumpur. From the month of September the arrival of a second aeroplane enabled the service to be maintained daily.

Port Swettenham.—This was declared open for air traffic by *Gazette* Notification No. 4387 of 17th September, 1937. The metalling and asphalting of the NE-SW runway was completed in July and after an exhaustive test by the Superintending Civil Engineer, Royal Air Force, Far East, was passed as fit for unrestricted service. This decision assumes that the portion common to both the NE-SW and NW-SE runways is a part of the NW-SE runway. Use of this opened portion has been confined to a day's joyriding by the Kuala Lumpur Flying Club and occasional short visits by the Royal Air Force machines but the ground has stood up very well and given no trouble of any kind.

The NW-SE runway, excluding the common portion was duly completed as a gravelled runway in May but it has not yet been opened for traffic.

After some consideration it was decided that this gravelling would give trouble unless surface-treated in some way and on 19th August, 1937, the sum of $10,000 was made available by the Air Ministry for this purpose, the method being that the runway should be divided into two longitudinal strips, one of them stabilized with bitumuls HRM, the other treated with Cutback asphalt of varying grades, it being admitted on all sides that this has been work of an experimental nature.

Good progress had been made when the work had to be stopped in October at the outset of the wet season.

The total sum spent on this aerodrome from Air Ministry Funds now totals $181,890.

Kerling.—A site for a possible landing ground was found and investigated near Kerling village which is situated near the main road between Kuala Kubu and Tanjong Malim. Nothing can be said about it yet except that it presents considerable possibilities of providing an emergency landing ground at very little cost. Further developments in 1938 seem likely.

NEGRI SEMBILAN.

There are no proper aerodromes in the State, but air craft in cases of grave emergency might make use of the following areas:

Seremban—

(i) The Race Course situated near the 3½ mile post on the Seremban-Kuala Pilah road.

(ii) The padang in Bukit Nanas Estate situated near the 2nd mile on the Seremban-Port Dickson road.

Bahau—

(iii) The padang in Bahau Estate, Kuala Pilah district.

The owners of the above properties have given permission for the inclusion of these areas in the Air Pilot of Malaya as "Emergency Landing Grounds".

PAHANG.

The Kuantan River provides excellent alighting and take-off facilities for flying-boats of the largest types. Permanent moorings for flying-boats and sea-planes have been established in the river and these are used by the flying-boats of the Royal Air Force whenever they visit.

CHAPTER XII.

Public Works.

The Public Works Establishment consists of the Adviser, Public Works, who is Director, Public Works, Straits Settlements, and has headquarters in Singapore, four State Engineers, nine Senior Executive Engineers and thirty Executive and Assistant Engineers with a subordinate staff of Technical Assistants and Overseers, the former of whom are recruited through a system of apprenticeship.

The authorized provision for Public Works and Personal Emoluments was $11.491,733, of which $9,661,585 was spent under the heads shown below:

—	1937.		1936.	
	Provision.	Expenditure.	Provision.	Expenditure.
	$	$	$	$
Annually Recurrent ...	4,058,899	3,980,425	3,923,188	3,839,396
Other Charges and Personal Emoluments ...	1,304,661	1,235,137	1,216,048	1,147,072
Special Services ...	5,520,755	3,956,103	3,402,634	2,251,014
Loan and Revenue Account	607,418	489,920	287,665	204,683

In addition to the above a sum of $678,781 was spent on works carried out for other departments making a total spent of $10,340,366. The expenditure was 84.1 per cent. of the provision and the cost of administration was 9.5 per cent. of the total amount spent.

The comparative percentages of expenditure to authorized provision for the last three years were:

	1937.	1936.	1935.
(*a*) Annually Recurrent ...	98.07	97.87	98.00
(*b*) Other Charges ...	94.75	94.33	89.40
		(Including P.E.)	
(*c*) Special Services ...	71.65	66.15	83.60
(*d*) Loan and Revenue a/c.	80.75	71.15	(Including Loan and Revenue a/c.)

There are 14,882 buildings of a total value of $84,826,159 to be maintained and the expenditure on maintenance was $1,147,347 or 1.35 per cent. of the capital value. Corresponding figures for 1936 and 1935 were 1.16 and .995 respectively. With increased provision for upkeep and painting of buildings, the arrears left over from the depression period have been reduced, but the position is still far from satisfactory. Modern methods of construction, involving the elimination of nearly all woodwork, are employed wherever possible when erecting new buildings.

Of a total provision of $5,520,755 for Special Services, $3,956,103 or 71.65 per cent. was expended. The building programme embraced a large number of items, but none of major interest or importance. Considerable progress was made during the year on the two large works continued from the previous year.

Three hundred and eighty-nine thousand, five hundred and sixty-one dollars was spent on the provision of accommodation for the Malay Regiment, Port Dickson. The total estimated cost is $1,428,480, of which $963,275 has been spent. All buildings have been designed by the Government Architect, Singapore, and are of permanent construction, complete with modern sanitation and electric light.

The new market for the Kuala Lumpur Sanitary Board with an estimated total cost of $330,000 was half completed at the end of the year despite difficulties in obtaining steel. It is a large single storied building in vibrated reinforced concrete and when completed will have an area of 77,500 square feet. Limitations of the site precluding future extension at ground level, the roof is designed to form the floor of an extra storey.

Water supplies were efficiently maintained during the year, and regular analyses of samples showed satisfactory results. Shortage of water was experienced during the drought season at Serdang, Sungei Buloh and Kepong in Selangor and Raub and Kuantan in Pahang. There are 48 water supplies in the Federation and full statistics are available for 41 of these. The capital value of these 41 supplies is $21,381,862. During the year 7,049 million gallons were supplied and a nett revenue of $797,800 over the cost of upkeep was collected, 3.74 per cent. of the capital cost.

Two new supplies were completed at Kampong Gajah and Selama, both in Perak, and good progress has been made on new supplies for Enggor and Parit in Perak and the Ulu Langat Valley in Selangor. Extensive work was carried out on the

Lumut and the new Kinta district supplies; improvements were also made to water supplies at Kuala Lumpur, Tapah, Bagan Serai, Telok Anson and Kuala Lipis.

Over $75,000 was spent on the provision of modern sanitary arrangements to quarters and offices. The system of disposal is by bacteriolytic tank and sub-surface irrigation, percolating filters being used where conditions demand them.

Difficulty was experienced in Pahang and Negri Sembilan in obtaining sufficient labour to meet the increased demand. Wage rates showed rapid increase in the early months but steadied down later; this increase, and the general rise in prices of both manufactured articles and local primary commodities, was reflected in construction costs.

DRAINAGE AND IRRIGATION.

The Drainage and Irrigation Establishment consists of the Adviser, Drainage and Irrigation, who is Director, Drainage and Irrigation, Straits Settlements, and has headquarters in Kuala Lumpur, an Assistant Adviser, two Senior Drainage and Irrigation Engineers, 20 Drainage and Irrigation and Assistant Drainage and Irrigation Engineers with a subordinate staff of Technical Assistants, Irrigation Inspectors and Overseers, the former of whom are recruited through a system of apprenticeship.

Krian Irrigation.—During the year, the Krian Irrigation Extension Works which have been in hand since 1934 were completed at a cost of $376,495, of which half was paid by the Colony Government in respect of the trans-Krian area at Sungei Acheh. These extension works make available for cultivation a further 5,000 acres in Krian and an area of 4,500 acres in the Sungei Acheh area in Province Wellesley.

The 1936-37 crop in the Krian area of 49,580 acres amounted to 17,897,010 gantangs equivalent to 361 gantangs per acre.

In regard to the 1937-38 season, June was a dry month the area being well supplied with water from the reservoir. July, with a rainfall 50 per cent. below the average reduced the reservoir, but full irrigation supply was maintained throughout the month. Drought conditions prevailed in August when the reservoir failed to supply requirements for 25 days. The drought conditions broke in mid-September and the new canal from Ijok, as part of the Krian Irrigation Extension Works, came into action and conditions during the remainder of the year became normal. The prospect of a good crop is bright.

Investigations have been in hand for some time for the preparation of a scheme to supplement the present reservoir by not less than 50 per cent. by constructing a dam in the valley of the Sungei Merah which is now fed by the diversion canal from the Ijok.

In pursuance of the policy of bringing into cultivation all available land within command of the irrigation works, a further area of 350 acres in Selinsing which had gone out of cultivation owing to bad drainage, has been bunded and drained during the year.

The construction of an irrigation supply to some 530 acres direct from the Ijok diversion canal in the valley of the Sungei Segar was largely completed during the year.

Sungei Manik Irrigation Scheme.—The construction work in hand during the year virtually completed the first three stages, comprising all the area to the south of the Lampam and west of the Batang Padang Rivers, approximately, 10,000 acres. The protective bund on the north, along the Sungei Lampam, was completed by dragline excavator, bringing the protective bunding to over 21 miles. Thereafter the machine worked on the construction of the main canal through the third stage. Work was also in hand on the construction of the distributors and the necessary falls in the main canal.

The 1936-37 harvest gave average yields of from 230 to 270 gantangs per acre in Stage I.

At the end of 1936, 6.445 acres of land had been taken up in the area and by the end of 1937, this has been increased to 7,304 acres.

The conditions in the rubber and copra markets had an adverse effect on the rate of colonisation, many new settlers did not follow up their last year's efforts and the planted acreage did not show any increase on last year.

Maintenance was carried out by a labour force recruited from Malays resident in the area, the wages paid being a welcome addition to the income of the planters, especially those whose lots are not fully developed yet.

Extensive surveys and investigations have been carried out in the area north of the Lampam as far as the Kinta River to establish the most suitable area for the extension of the irrigated area to the full capacity of the Sungei Batang Padang.

The plan for the final lay-out of the scheme has now been prepared and provides for a padi area totalling in all 24,000 acres and a kampong area on higher land of approximately 6,700 acres.

Pumping Schemes, Perak Riverine Areas.—The pumping plant at Bota ran satisfactorily during the year. Two thousand one hundred and twenty-one acres were planted as compared with 1,730 the previous year. The operating costs at $3.25 per acre were higher than last year, by an amount proportionate to the increase in wages.

Irrigation was given to the Pulau Tiga and Kampong Gajah *bendangs* which are now linked up in a scheme supplied from a floating pumping plant at Teluk Sareh on the Perak River. Work utilising the local kampong Malays was continued on the main canal during the year and the total length of over nine miles was completed. During the 1936-37 season, 1,728 acres have been planted and the harvest prospects are reported to be good.

Bagan Datoh Delta Drainage.—The construction of the new coastal bund for the Bagan Datoh Delta Drainage area was carried on throughout the year and in November, the portion between Sungei Balai-Sungei Betul and Rungkup-Sungei Tiang, over eight miles in length, being completed. The new bund takes in all alienated land outside the coast canal but is sited sufficiently far inland to preserve an adequate belt of mangrove forest as a protection against sea erosion.

The acreage of the drainage area at the end of the year was, in round figures 48,000 acres; maintenance charges amounted to $42,307 and $51,718 were collected in drainage rate.

Controlled Drainage Scheme, Panchang Bedina Padi Area.—This area, comprising some 17,000 acres of potential padi land is now the most important padi area in the State of Selangor. Some 11,500 acres were planted during the 1936-37 season, the crop harvested being 3,429,000 gantangs or 295 gantangs per acre which from an area five years ago in virgin jungle may be considered to be highly satisfactory. Of this crop, 691,300 gantangs were sold and exported from the area, at a cash value of $62,000.

A similar area has been planted during the 1937-1938 season. There is shortage of water from Parits 8 to 13 but the planted area is reported to be making good progress in spite of this.

Water supply for the irrigation of the area is by the control of the run off from direct rainfall and the influx of water into the controlled drainage system from the adjoining swamp. A scheme for tapping the waters of the Tanjong Karang Swamp to supplement the supply is under consideration.

Beranang Padi Area.—The success, this season, of the irrigation scheme which was completed in 1935 has been very gratifying, the ra'ayats now appreciating the value of the irrigation scheme. Eight hundred acres have been planted this season as compared with 20 acres last season and there are prospects of an exceptionally good crop.

Kuang Irrigation Scheme.—Improvements and extensions of the work constructed in 1935 have been in progress and a second dam has been built during the year to supply the main part of the area below the Sungei Buloh and Kuang Road. Practically the whole area of 450 acres has been planted and the crop promises to be a good one.

Bunding of Coastal Areas.—The bunding scheme along the Selangor Coast, commenced in 1933, which aims at the protection of small-holdings under coconut cultivation in the Sabak Bernam Peninsular and along the Selangor Coast down to Sungei Tengi and which also gives protection to a three-mile belt of potential padi land, was continued throughout the year. The total length of the bund from the Bernam River to the Tengi is 47 miles which will protect the whole of the potentially fertile coastal area from inundation by sea water at high tide. Some 4½ miles of the bund were completed during the year making 30 miles in all and the internal drainage of the kampong area was also completed.

There is a remarkable change in conditions in the Sabak Bernam Peninsular. At Parit Bharu, the area both inside and outside the bund, was very bare with such coconut palms as existed in a very barren and stunted condition. The position to-day is that the older coconut trees are bearing well and the younger trees growing well, whilst areas formerly bare within the bund are now replanted. Outside the bund, a considerable expanse of bare land is now being rapidly clothed with mangrove vegetation. Throughout the whole length of the Peninsular bund, the condition of cultivation presents a pleasing aspect and it is evident the small-holders appreciate the benefits of the scheme. On the whole, the kampongs are now being well kept and there is much evidence of improvement to the kampong drainage being carried out by the people.

Since 1935, a programme for the improvement of agriculture and health in the blocks of small-holdings along the coast between Klang and Kuala Selangor has been in progress. The schemes for Jeram Pantai and Rantau Panjang have been completed and those for Teluk Pulai and Sementa were nearing completion by the end of 1937. These lands are almost entirely Malay holdings under coconut cultivation and in the Jeram and Rantau Panjang areas where the drainage and bunding have been completed, spectacular improvement in yields is already reported.

The whole of the population from Klang to Kuala Selangor are, unfortunately, seriously infected with malaria but it is expected that these bunding schemes will eventually simplify the problem of combating malaria. Much improvement of the kampong drainage, however, remains to be done before the full benefit of the schemes can be felt and it is proposed to declare the areas under the Anti-Malaria Enactment.

Ujong Permatang Drainage Scheme.—Drainage in this area has for some years been unsatisfactory due to silting of the outlet channels and lack of co-ordination of local interests in construction of main drainage. Moreover, bund protection along the coast was discontinuous. The scheme, construction for which commenced in August, will provide for reorganisation of the drainage system with provision of outlets into the Sungei Tengi and Selangor River which will be non-silting, as well as adequate protection from inundation by bunding along the coast.

Construction of the two tidal control gates at the sites of the new outlets are in progress and some two miles of new drains have been dug.

Teluk Panglima Garang and Tanjong Duablas Malay Reservation.—These two areas are somewhat different from the true coastal areas. Situated slightly inland and the soil being of a very peaty nature, the main requirement is good drainage, no bunding being necessary. Cultivation consists of rubber, pineapples and a small amount of coffee and coconuts.

The Teluk Panglima Garang area comprises some 5,000 acres much of which is still under jungle. The main drainage outlet being tidal, has been gated and four miles of drains were completed during the year under review.

At Tanjong Duablas, the drainage has been improved and the land owners compensated for their original work. The area will now be constituted a drainage area and brought under proper maintenance.

Sungei Muar Irrigation.—Irrigation from the dam on the Sungei Muar, started in 1935, was further extended during the year. Considerable trouble was experienced during the previous season owing to large slips of earth falling into the *tali ayer* and blocking the supply. An open *tali ayer* has now been replaced by a 24-inch diameter pipe for a length of 1,700 feet. Towards the end of the year the water supply reached the further end of the scheme which embraces 1,400 acres.

Ampang Jeram Irrigation Scheme.—The concrete dam at Ampang Jeram, which was constructed in 1933, supplied an existing *tali ayer* which irrigated some 132 acres. By the end of 1937, irrigation served from this dam had been extended to the full area of 630 acres.

Labu Irrigation Scheme.—Fourteen brushwood dams have now been removed from the Sungei Labu as the result of irrigation works and the consequent improvement in the drainage of land in this vicinity is very evident and satisfactory crops have been obtained.

New dams have been constructed during the year at Sungei Klawang for the irrigation of 250 acres, at Mantin Dalam for the irrigation of 100 acres and construction work is in hand on the erection of an intake and *tali ayer* for some 250 acres in Penajis.

Irrigation in Pahang.—There are now in operation in Pahang 37 irrigation schemes and they cover an area of over 10,500 acres. During the year, irrigation was given to small areas totalling 1,471 acres, of which 747 acres comprise land not previously planted. The works consist of the construction of dams, headworks, irrigation canals and outlet control gates. The cost amounted to $21,000 or roughly $14 per acre.

One of these schemes, Ulu Atok, is a resuscitation of an earlier scheme destroyed, like so many others, by the great flood of 1926. By enlarging and deepening the flood spillway, it is expected that a heavy run-off can be discharged without endangering the new works.

Paya Besar Padi Area.—This year has seen the largest construction programme yet carried out since the scheme commenced in 1932. A further 800 acres can now be served making a total of 2,150 acres. The complete scheme will eventually serve 2,980 acres at an estimate cost of $74,000 representing nearly $25 per acre.

Work on the development of the adjoining kampong area at Permatang Badak was completed during the year, the areas made available being kampong 344 acres, village centre 17 acres, buffalo grazing land 279 acres flood refuge 40 acres, path and access reserves 16 acres—a total of 696 acres at a cost of under $8,000 or roughly $12 an acre; 114 acres of kampong were taken up during the year.

It is hoped that the development of the kampong area will improve the present progress on the opening up of this padi area where up-to-date only some 400 acres have been planted.

Pahang Tua Pumping Scheme.—The pumping scheme at Pahang Tua aims at supplying irrigation water from the Pahang River through the Sungei Pahang Tua to nearly 3,000 acres of potential padi land in the mukims of Langgar and Pahang Tua in Pekan district. The whole of this area suffered severely from the 1926 floods and until recently when the raiats heard of Government's intention to give irrigation, the area had gone completely out of cultivation and a great part had reverted to swamp which has endangered the health of the adjoining kampong.

The pumping plant was ordered through the Crown Agents early in the year but owing to the general delay in obtaining machinery, delivery has not yet been effected.

The pumping set will comprise an Axial flow pump driven by diesel engine, the whole mounted on a steel pontoon moored to the bank, but able to rise and fall with the river water.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment (Cap. 2) and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;

(*b*) Courts of a Magistrate of the First Class;

(*c*) Courts of a Magistrate of the Second Class;

(*d*) Courts of a Kathi and Courts of an Assistant Kathi;

(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record and generally, in original jurisdiction, has the same jurisdiction and authority as is exercised in England by the Chancery and King's Bench Divisions of the High Court of Justice. The establishment consists of a Chief Justice and three Judges, but the Chief Justice and Judges of the Supreme Court of the Colony and the Judge of the Supreme Court of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The Chief Justice and Judges are appointed by the High Commissioner, who may also appoint any fit and proper person to act temporarily as Chief Justice or as a Judge, and may terminate any such appointment.

Magistrates are appointed by the Resident by name or office. The posts of First Magistrate, Kuala Lumpur, and of First Magistrate, Ipoh, will in the future be filled by officers of the Colonial Legal Service. All other appointments are made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex-officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally, every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Warden of Mines holds a Court constituted under the Mining Enactment (Cap. 147) for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code (Cap. 154) in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang, the Police Contingent is in charge of a Chief Police Officer with the rank of Deputy Commissioner, who, subject to the general direction of the Commissioner of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his Contingent. A fifth Contingent exists in the Depôt at Kuala Lumpur under the Commandant, an officer also of the rank of Deputy Commissioner who is responsible to the Commissioner of Police for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is, also in Kuala Lumpur, the Headquarters Staff made up of the staff of the Commissioner of Police, the Criminal Intelligence Branch which co-ordinates Criminal and Political information in the Federated Malay States, and the Criminal Registry or Finger-print Bureau which serves not only the Federated Malay States, but also the Straits Settlements and Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan besides corresponding with India, Hong Kong, Netherland Indies, Siam and Indo-China.

The Federated Malay States Police cadre provides thirteen British Officers for service on deputation in Unfederated Malay States and the Federated Malay States Railway Police.

The total approved strength of the Police Force was 3,990 on 31st December, 1937, comprised as follows:

British Officers	93
Malay and other Asiatic Officers	61
Malay Rank and File	2,385
Northern Indian Rank and File	1,222
Detectives (of various nationalities)	229

In addition there is a force of Veterinary Police of 68 Malays and Indians who, for disciplinary purposes and reasons of economy, are housed in Police barracks and is paid from Police Votes though under the direction of the Veterinary Department.

During the year 226 Malays were enrolled. Of the men recruited during the year, fifty had an English education. The majority came from Negri Sembilan, Perak and Selangor. There was a falling off of Malacca men (due to poor standard and not lack of applicants). The average height of these recruits was 5′ 5″. Eighty-four Northern Indians were enrolled. The physical standard of recruits of both nationalities was up to the average.

Offences of all kinds reported at Police Stations during the year totalled 99,639 compared with 95,361 in 1936. Of this total 7,148 were reports of seizable offences, as against 7,697 the previous year. At the close of the year 2,229 convictions had been recorded in respect of seizable offences.

Under the category of serious crime the offences of murder, gang-robbery and robbery were classified together. In 1937 offences under these headings totalled 54, fewer than ever previously recorded. There were only three gang-robberies during the year whilst robberies fell from 42 to 18. There was one murder committed in the course of gang-robbery or robbery.

The reports of house-breaking showed a decrease and totalled 991 compared with 1,166 the previous year whilst theft fell from 3,930 in 1936 to 3,711 in 1937. The total of thefts included 723 reports of thefts of bicycles, a type of offence that caused the Police considerable trouble.

Non-seizable offences totalled 92,491 compared with 87,664 in 1936. The Police prosecuted in 68,564 of these cases. There was no public gaming on a large scale during the year.

Nineteen firearms were recovered by the Police during the year 1937. Of these four were identified as having been lost.

There was considerable industrial unrest in the early part of the year culminating in March in widespread strikes throughout Selangor and Negri Sembilan. Factories in Klang district, tapping coolies throughout Selangor and Negri Sembilan and the labour force of the Batu Arang Coal Mine were all affected. The discontent was originally the outcome of economic grievances but advantage was taken of this situation by politically-minded persons directed by prominent Labour Union leaders from Singapore to incite the workers to defy authority and cause disturbance. For the first time in 25 years Military forces were called out in aid of the civil power. Fortunately they were only required to act as guards over property at Batu Arang, as patrols throughout Selangor and Negri Sembilan and as reserves in the event of the situation getting beyond the control of the police. The situation was relieved by a police raid on the headquarters of the malcontents situated on the Batu Arang property. This raid culminated in the death of one of the strikers the only fatality that occurred during the strikes.

From the time of the outbreak of hostilities between Japan and China to the end of the year there was considerable anti-Japanese feeling on behalf of the Chinese population. However, the Chinese as a community behaved themselves with commendable restraint and confined their activities to the establishment of a strict boycott of Japanese goods. In the enforcement of this boycott there were frequent incidents of potential seriousness but fortunately apart from a regrettable mutilation of a Chinese by cutting off his ear no serious personal injury was inflicted nor any very great damage done to property.

The suppression of brothels and of trading in women is undertaken by the Police. In all there were eight prosecutions in pursuance of this duty; the traffic was well in check.

The issue of passports was performed by the Police.

Six hundred and eighty-seven new passports were issued during the year, 341 were renewed, 335 endorsements were made and 215 *visas* granted.

During the year inquiry by means of finger-print slips was made at Criminal Registry regarding 23,829 persons charged with offences and identity was established in 5,310 instances. There were 10,625 new records filed whilst 9,620 were deleted, these latter comprise mostly the records of persons lost sight of for 20 years subsequent to the expiration of their last recorded sentences. Since the opening of the Registry in 1904 a total of 316,925 records have been filed, of which 84,552 have been deleted leaving 232,373.

There were 265 persons banished from the Federated Malay States during the year.

The control of traffic throughout the Federated Malay States and the registration of motor vehicles in Perak and Selangor involved the Police in a great deal of work. To cope with registration the staff, equipment and accommodation were inadequate.

The Police tested 7,759 drivers and issued 3,033 certificates of competency. A total of 1,315 motor accidents were investigated; they involved 106 deaths and 970 injured persons.

Revenue collected by the Police Traffic and Registration branches totalled $1,021,967. Arrangements had been made at the close of the year for the registration work to be handed over to another department.

PRISONS.

Description.—Of the six prisons in the Federated Malay States, the one at Taiping is primarily a convict prison. The others at Batu Gajah, Kuala Lumpur, Seremban, Kuala Lipis and Kuantan are local prisons.

Prisoners are also detained for short periods in lock-up cells at certain police stations.

Vagrants are confined to special vagrant wards.

Population.—The total daily average population of all the prisons which in 1936 was 980.33 decreased to 852.78 in 1937.

At the beginning of 1937 there were 854 prisoners remaining and 4,805 were admitted during the year. On the 31st December, 1937, there were 688 prisoners remaining in all the prisons after 4,954 discharges, 13 deaths and 4 executions.

Health.—The health of the prisoners was good.

Juvenile Offenders—Juvenile offenders are sent to the Reformatory at Singapore as there is no special institution for their reception in the Federated Malay States. This Reformatory is administered by the Education Department.

There is no probation system.

CHAPTER XIV.

Legislation.

During 1937 twenty-five Federal Enactments were passed. Most of these effected to existing Enactments comparatively minor amendments which experience had shown to be desirable. The more important of the Enactments passed during the year are the following:

No. 3.—The Civil Law Enactment. From a strictly legal point of view this Enactment is one of the most important measures which has been passed in the Federated Malay States for a considerable period, because for the first time in the history of legislation in this country it is definitely laid down (section 2) that the Courts shall follow the Common Law of England and the rules of equity as administered in England save in so far as other provisions are not made by written laws in force in the Federated Malay States. Thus the foundations are laid on which can be built up by subsequent local legislation any amendments of and additions to such common law and rules of equity.

Other provisions of the Enactment are borrowed from the Law Reform (Married Women and Tortfeasors) Act, 1935, and section 7 of the Enactment reproduces the rule against accumulations originally enacted in England by the Thellusson Act of 1800. It is, however, provided that the provisions of this Enactment shall not affect the Muhammadan law relating to succession or to the relations between husband and wife.

No. 6.—The Mining (Amendment) Enactment. This Enactment was passed in consequence of representations to Government that considerable quantities of minerals, especially gold, were being stolen by unauthorized persons who loitered in the mines. Such loitering was therefore made an offence. Complementary amendments with a view to combating this evil were also made in the State Enactments regulating gold buyers.

No. 8.—The Air Navigation Enactment. The Enactments, regulations, rules and directions in connexion with air navigation are many and complex and are continually being revised and amended. The ultimate basis of all this legislation is to be found in International Conventions to which the Federated Malay States is adherent. From a practical point of view it is desirable that all new legislation affecting air navigation should be applied throughout Malaya as nearly simultaneously as may be possible.

This Enactment, while respecting the legislative independence of the Federated Malay States, provides a rapid method of assimilating its legislation, in respect of aerial navigation, to that of the Colony by means of notifications in the *Gazette* incorporating such legislation (with such amendments as local requirements may render necessary) into the Enactments as Schedules thereto. It supersedes and therefore repeals the Air Navigation Enactment (Cap. 166 of the Revised Edition).

No. 10.—The Rubber Supervision Enactment. This Enactment consolidates, amends and replaces the Rubber Supervision Enactment (Cap. 88 of the Revised Edition).

The most important amendments are those providing for the control by licence of packers of rubber for export to any country outside Malaya. This control was considered necessary in view of complaints received from consignees overseas to the effect that consignments had arrived short in weight by amounts which could not be explained solely by natural shrinkage. The provisions for licensing are intended to ensure that rubber packers shall be persons of repute and of some financial standing.

In accordance with the policy of decentralization the rule-making power in this, as in other recent Enactments, is transferred to the Ruler in State Council.

No. 17.—The Road Traffic Enactment. This Enactment repeals and replaces the Motor Vehicles Enactment (Cap. 168), the Transport Licensing Enactment (Cap. 169) and certain sections of the Minor Offences Enactment (Cap. 46) and of the Vehicles Enactment (Cap. 167).

Part I deals generally with registration, licensing and regulation of motor vehicles and their drivers. It is based on the Roads Act, 1920, and Parts I of the Road Traffic Acts, 1930 and 1934, and, subject to necessary local modifications, substantially reproduces the main provisions of those Acts.

This part also provides the necessary machinery for the purpose of implementing the provisions of the Taxation of Foreign Motor Vehicles Convention, 1931, when such Convention shall have been applied to the Federated Malay States.

Part II deals with insurance against third party risks and substantially reproduces the English legislation which exists to-day as embodied in Part II of the Road Traffic Act, 1930 (as amended by Part II of the Road Traffic Act, 1934), and the Third Parties (Rights against Insurers) Act, 1930.

Part III deals with provisions as to the use of highways and is based on Part III of the Road Traffic Act, 1930.

Part IV deals with the regulation by a Transport Board, constituted under this part, of public service vehicles and their personnel, and of goods vehicles.

This part has been adapted from Part IV of the Road Traffic Act, 1930, and Part I of the Road and Rail Traffic Act, 1933, and replaces the Transport Licensing Enactment which was passed in 1934 but to which effect had not been given.

Part V contains general sections dealing with proceedings and penalties.

The whole Enactment will be in force in 1938; Part II as from the 1st of July the rest of the Enactment as from the 1st of January.

For the first time in the Federated Malay States this Enactment, as printed and sold to the public, includes a Table of Contents and a detailed alphabetical Index for ease of reference.

No. 20.—The Fisheries Enactment. This Enactment consolidates and amends and replaces the law relating to fisheries previously to be found in Chapter 93 of the revised edition.

The appointment of the necessary officers is in the hands of the High Commissioner but rules under the Enactment may be separately made for each State by its Ruler in State Council. Additional powers are provided for the making of rules for preventing persons killing or taking fish in specified areas; prohibiting, except under licence, the killing or taking of fish in specified areas; prohibiting, in specified areas, any particular method of killing or taking fish; appointing persons by name or by office to issue licences; controlling the importation, sale, cultivation or keeping of fish not natives of Malaya; and controlling the methods of preserving fish.

No. 23.—The Supplement to the Laws Enactment. This Enactment repeals and replaces the Revised Edition of the Laws (Annual Supplements) Enactment, 1936, and authorizes a new and improved system of publishing the amendments effected from time to time to the Revised Edition of the Laws, and also the new Principal Enactments enacted in each year.

In future, instead of reprinting each year, with the necessary additions and amendments, the whole of the previous annual volume, one Supplement only will be published. This will be bound in expansible loose-leaf bindings of a new type and can be brought up-to-date each year by incorporating in the loose-leaf binding any new matter (e.g., new Principal Enactments) and by substituting therein such pages of the original matter as are affected by any amendment of the laws. These amendments moreover will be presented in a form considered more practical than that in which they are now printed. Shortly put, any section, sub-section or paragraph affected by any minor amendment will be reprinted as a whole with the amendment incorporated.

The Enactment also gives wide powers allowing the Legal Adviser to prepare the Supplement in the form which will be of the greatest practical utility, and these powers are being exercised in respect of many matters of detail such as the indexing of Enactments, cross-references, marginal notes and footnotes, condensation and paraphrasing of the formal parts of amending Enactments, pagination of the Supplement, etc.

State Legislation.—In pursuance of the policy of decentralization certain legislative measures were passed by the State Legislatures which might previously have been included in the year's Federal legislation. Since this report does not, however, deal with other than Federal legislation it will be sufficient to indicate the most important matters dealt with by State legislation as including, in all four States, legislation amending the Gold Buyers Enactments by provisions intended to be complementary to the amendments made to Federal legislation by Enactment 6 of 1937 (q.v.); and legislation providing for Anti-malarial measures. In addition Perak passed an Enactment amending the Dindings Cession Enactment and Selangor passed an Enactment amending the Pineapple Industry Enactment.

CHAPTER XV.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—six branches.

Hong Kong and Shanghai Banking Corporation—two branches.

The Mercantile Bank of India Limited—four branches.

There are no agricultural or co-operative banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

Currency.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

Weights and Measures.

Under the Weights and Measures Enactment (Cap. 67) the standard weights and measures are:

(i) The Imperial standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns ... ... =1 chi
10 chi ... ... =1 tahil (1⅓ oz.)
16 tahils ... ... =1 kati
100 katies ... ... =1 pikul (133⅓ lbs.)
40 pikuls ... ... =1 koyan

CHAPTER XVI.

Public Finance and Taxation.

Budget for 1937.—The Estimates of Revenue and Expenditure for the year 1937 provided for a revenue of $61,067,998 (excluding Railway Revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway Expenditure) of $57,340,314.

Actual Revenue.—The actual revenue for the year was $80,864,589. It exceeded the estimate by $19,796,591. The principal items of revenue which were under-estimated were:

Export Duty on Tin	...	by	$11,487,585
,, Rubber	...	,,	1,763,184
Import Duty on Tobacco	...	,,	1,246,627
,, Petroleum	...	,,	876,440
,, Malt Liquor and Spirits	...	,,	1,146,955
,, Textiles	...	,,	467,974
Licences	...	,,	1,165,205
Fees	...	,,	587,113
Miscellaneous	...	,,	384,261
Forests	...	,,	381,223
Light, Power and Water	...	,,	421,575
Posts and Telegraphs and Telephones	...	,,	213,273
Land Sales	...	,,	299,722
Total	...		$20,441,137

The following items of revenue failed to reach the estimate owing to the reduction in the rate of duty during the year:

Import Duty on Sugar	...	by	$438,236
,, Kerosene	...	,,	109,242
Total	...		$547,478

Actual Expenditure.—The actual expenditure of the year was $71,143,471, which exceeded the estimate by $13,803,157. The year's expenditure included the following large items for which no provision was made in the Estimates:

(*a*) Contribution to the Special Reserve Fund ...	$15,000,000
(*b*) Payment of Arrears of Claims for the Maintenance of Pulau Jerejak Camp to the Straits Settlements Government for the Years 1921-1932 ...	282,668

(*c*) Writing off of the Debt due by the Central Health Board	$112,447
(*d*) Non-Pensionable Children's Allowance	441,340
(*e*) Gift to H.H. the Sultan of Selangor on the Occasion of His Highness's Golden Jubilee	470,814
(*f*) Expenses of Distinguished Visitors to attend the Coronation of His Majesty the King	111,195
(*g*) Writing off of Debt due to Government by H.H. the late Yang di-Pertuan Besar of Negri Sembilan	39,741
(*h*) Writing off of Balance of Loan due to Government by the late Sultan Abdullah	127,107
(*i*) Payment for Surrender of Interests in the Jelai Concession	73,000

Expenditure on certain services fell below the Estimates, the principal being:

(*a*) Public Works, Special Services ...	$1,260,097
(*b*) Pensions	452,378
(*c*) Military	180,059
(*d*) Education	147,080
(*e*) Drainage and Irrigation, Special Services	135,454
(*f*) Customs	131,792
(*g*) Posts and Telegraphs	122,922

Public Works, Special Services, for the year 1937 totalled $5,592,820.86, accounted for as under:

(*a*) Provision in 1937 Estimates	$4,949,901.00
(*b*) Additions during 1937	642,419.86
Total ...	$5,592,820.86

(*c*) Lapses	$ 150,135.89
(*d*) Revoted in 1938 Estimates	1,468,557.63
(*e*) Spent in 1937	3,689,808.72
(*f*) Balance to be revoted in 1938 ...	288,823.62
	$5,592,320.86

The reasons for unforeseen revotes in 1938 included:

(*a*) Delay in granting supplementary provision.

(*b*) Bad weather, and

(*c*) Delay in delivery of materials by Crown Agents.

Revenue Expenditure Surplus.—The revenue expenditure surplus for the year, after placing $15 million to reserve, was $9,721,118 against an estimated surplus of $3,727,684.

Public Debt.—The total amount of public debt on 31st December, 1937, was the same as on 31st December, 1936, being:

1931—4½ per cent. Federated Malay States Local Loan 1959—Issued at 98 in May, 1931	$16,000,000
1935—3 per cent. Federated Malay States Sterling Loan 1960-70—Issued at par in June, 1935	34,285,715
1936—3 per cent. Federated Malay States Local Loan 1956-66—Issued at par in July, 1936	15,000,000
Total ...	$65,285,715

The Sinking Funds Contributions in respect of the above three loans amounted to $2,719,838 on 31st December, 1937, as follows:

4½ per cent. Local Loan	$ 667,487
3 per cent. Sterling Loan	828,404
3 per cent. Local Loan	149,960
Supplementary	1,073,987

Assets and Liabilities.—The following statement shows the assets and liabilities on the 31st December, 1937:

GENERAL BALANCE SHEET, 31st DECEMBER, 1937.

LIABILITIES.		$	c.
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959), Balance at credit thereof (*a*)		2,713,509	85
Due to other Governments—			
Brunei (Current Account)	$4.50		
Burma (Agency Account)	743.62		
Crown Agents (Agency Account)	18,397.18		
Indian (Agency Account)	189,221.84		
Indian (Current Account)	10,841.31		
Malacca (Current Account)	12,266.55		
		231,475	00
Due to Railways		40,570	75
Family Remittances		722	35
Sundry Outstanding Accounts		325,325	32
Deposits—			
Courts	$223,755.47		
Forests	272,091.20		
Lands	318,593.37		
Postal	317,514.55		
Postal Account Stores, Colony	300,000.00		
Postal Account Stores, Kedah	70,000.00		
Postal Account Stores, Kelantan	5,000.00		
Planters' Loan Board	600,000.00		
Miscellaneous	1,029,807.39		
		3,136,761	98
Selangor River Protection Reserve Account		9,696	08
Sungei Buloh Cash Coupon Reserve Account		1,500	00
Sundry Funds—			
Bankruptcy Estates, Kuala Lumpur	$123,488.94		
Bankruptcy Estates, Perak	143,577.60		
Police Fine and Reward Fund	49,251.84		
Public Officers' Guarantee Fund	445,823.29		
Rubber Experimental Research and Propaganda Reserve Fund	1,004,940.00		
Philips' Agricultural Scholarship Fund	5,611.71		
Rembau Waris Fund	102,367.23		
Miscellaneous	40,680.23		
		1,915,740	84
Opium Revenue Replacement Reserve Fund		30,054,560	86
Special Reserve Fund		14,576,357	25
Surplus		85,880,937	39
		138,887,157	67

ASSETS.		$	c.
Cash—			
In Treasuries and Banks	$10,517,610.87		
In Agencies	69,543.77		
In Transit	129,188.03		
Fixed Deposits	8,195.48		
Joint Colonial Fund (Crown Agents)	45,642,857.14		
		56,367,395	29
Investments—Surplus Fund—			
Sterling Securities	$8,480,590.39		
Dollar Securities	12,575.00		
Rupee Securities	965,491.07		
		9,458,656	46
Investments—Special Reserve Fund—			
Sterling Securities	$11,553,857.25		
Dollar Securities	3,022,500.00		
		14,576,357	25
Investment—Opium Revenue Replacement Reserve Fund—			
Sterling Securities	$22,313,489.43		
Perak River Hydro-Electric Power Co. Ltd. Shares	7,741,071.43		
		30,054,560	86
Investments—Specific Funds—			
Bankruptcy Estates	$49,974.25		
Police Fine and Reward Fund	41,105.09		
Public Officers' Guarantee Fund	405,518.77		
Philips' Agricultural Scholarship Fund	5,554.00		
Rembau Waris Fund	70,488.50		
		572,640	61
Suspense—General		26,244	52
Suspense—Stores and Materials—			
Post Office	$667,674.04		
Public Works Department	219,832.61		
Electrical	520,799.39		
Forest	1,341.00		
Marine Slipway	15,393.94		
Punjabi Regiment	123,954.70		
		1,548,995	68
Advances—			
Due by other Governments	$29,387.21		
Bentong Tailings Retention Scheme	157,897.76		
Others	318,039.74		
		505,324	71
Imprests		86,873	50
Loans—			
Siamese Government (*b*)	$23,303,430.75		
Kelantan ,,	300,000.00		
Planters	834,090.08		
War Service Land Grant Scheme	621,855.76		
Agricultural	5,350.89		
Buildings	89,153.02		
Miscellaneous	536,228.29		
		25,690,108	79
		138,887,157	67

(*a*) The F.M.S. 4½ per cent. Local Loan, 1959, appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of the issue and expenditure on works authorised to be carried out appear on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) The repayment of the loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

NOTE:

(i) The F.M.S. 3 per cent. Sterling Loan, 1960-70 of £4,000,000 ($34,285,714.29) raised for the purpose of redeeming the 4½ per cent. Straits Settlements Sterling Loan, 1935-45, of £4,200,000 appears on the credit side of the Capital Account (*vide* Appendix B). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

(ii) The F.M.S. 3 per cent. Local Loan, 1956-66 of $15,000,000 raised to meet the deficiency in the Sinking Fund for the redemption of the Straits Settlements 6 per cent. Sterling Loan, on the optional date appears on the credit side of the Capital Account (*vide* Appendix D). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

Railways.—The result on the year's working, after allocation of $2,086,506 from revenue to the Renewals Fund and exclusive of the direct contribution of $1,000,000 to the fund from the general Government revenue, showed a surplus of $2,616,520 which was also credited to the fund.

The balance to the credit of the Renewals Fund on 31st December, 1937, was $16,238,249 as compared with $11,676,571 on the 31st December, 1936.

Loan to Siam.—The loan to the Siamese Government of £4,630,000 ($39,685,714), which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $23,303,431 on 31st December, 1937, having been reduced by the payment of the fourteenth instalment due on 1st January, 1936.

Loan to Kelantan.—The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1937.

Loans—Planters, War Service, etc.—The total amount of Planters and War Service loans outstanding on 31st December, 1937, was $1,455,946 against $2,283,650 on 31st December, 1936.

Other Loans.—Miscellaneous loans outstanding on 31st December, 1937, amounted to $630,732 compared with $984,801 on 31st December, 1936.

Surplus.—The surplus on 31st December, 1936, was $76,159,819. As the revenue for the year exceeded the expenditure (including the $15 millions contribution to the Special Reserve Fund) by $9,721,118, the surplus was increased to $85,880,937 on 31st December, 1937.

The gross liquid assets in cash and easily realisable investments, exclusive of investments ear-marked for specific purposes, amounted to $65,826,052. After allowing for cash liabilities, the net liquid surplus is $58,023,390 at the end of the year as compared with the corresponding figure of $45,343,988 at the end of 1936.

The balance of the surplus of $85,880,937 less net liquid of $58,023,390, viz.: $27,857,547 is locked up as follows:

Loans	$25,690,109
Advances and Imprests	592,198
Stores and Materials and Suspense ...	1,575,240

Rubber Experimental Research and Propaganda Fund.—This fund which was created by an allocation of $2½ millions in 1930 and stood at $2,009,870 on 31st December, 1936, was reduced to $1,004,940 on 31st December, 1937, by monthly instalments paid to the Malayan Rubber Fund to whom the administration of the balance of this fund was transferred in accordance with a resolution of the Federal Council on 6th November, 1936.

Opium Revenue Replacement Reserve Fund.—This fund was started with $10 millions provided out of revenue in 1925; with $9,828,503, representing contribution at 15 per cent. of annual revenue from chandu sales for the years 1926 to 1930, and with the accumulated interest from inception to 31st December, 1930, and for the years 1936 and 1937 stood at valuation on 31st December, 1937, at $30,054,561 as against $29,082,337 on 31st December, 1936.

The interest earned on this fund for the five years 1931 to 1935 was credited to revenue and contributions to the fund have been suspended since 1931.

Special Reserve Fund.—This fund was created with effect from 1st January, 1937, with a first contribution of $15 millions from revenue to give effect to the decision of the Secretary of State that a special reserve equivalent to an year's recurrent expenditure should be built up out of future surpluses. The fund stood at $14,576,357 at the end of the year as the result of valuation of securities at middle market prices on 31st December, 1937.

Federated Malay States Sterling Loan Capital Account.—A statement of the 3 per cent. Sterling Loan Account is published as Appendix B to this report showing that the proceeds have been utilised for the redemption of 4½ per cent. Straits Settlements Sterling Loan.

Federated Malay States Local Loan Capital Accounts.—

(*a*) A statement of the 4½ per cent. Local Loan Capital Account is published as Appendix C to this report. Of the total proceeds of $15,640,000, expenditure on Railway, Electrical and Public Works accounted for $12,926,490, leaving a balance of $2,713,510 available to meet capital expenditure in 1938 and subsequent years.

(*b*) A statement of the 3 per cent. Local Loan Capital Account is published as Appendix D to this report showing that the proceeds have been utilised for the redemption of the 6 per cent. Straits Settlements Sterling Loan.

The following is a summary of the Customs tariff:

TABLE A.

IMPORT DUTIES.

Description of goods.	Unit.	Rates of duty. Full duty.	 Preferential duty.
I.—Intoxicating liquors:		$ c.	$ c.
(*a*) **Rectified spirit**	Per proof gallon	... 14 00	
(*b*) **Brandy and any other intoxicating liquor not hereinafter provided for**	,,	... 14 00	... 10 50
(*c*) **Brandy in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit**	Per gallon	... 10 50	... 8 00
(*d*) **Whisky, rum and gin** ...	Per proof gallon	... 13 00	
(*e*) **Whisky, rum and gin in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit**	Per gallon	... 9 50	
(*f*) **Toddy arrack, saki and samsu including medicated samsu**	Per proof gallon	... 12 00	
(*g*) **Bitters and liqueurs not exceeding 100 per cent. of proof spirit**	Per gallon	... 13 00	
(*h*) **Sparkling wines not exceeding 42 per cent. of proof spirit**	,,	... 6 00	... 5 00
(*i*) **Still wines exceeding 26 per cent. but not exceeding 42 per cent. of proof spirit**	,,	... 4 50	... 3 90
(*j*) **Still wines not exceeding 26 per cent. of proof spirit**	,,	... 1 50	... 90
(*k*) **Ale, beer, stout, porter, cider and perry**	,,	... 1 30	... 1 20

Description of goods.	Unit.	Rates of duty.	
		Full duty.	Preferential duty.
		$ c.	$ c.
II.—Tobacco :			
(*a*) Cigars and snuff	Per pound ...	1 60	
(*b*) Cigarettes	,, ...	1 10 ...	1 00
(*c*) Unmanufactured tobacco ...	,, ...	70	
(*d*) Manufactured tobacco excluding cigars, cigarettes and snuff—			
(i) if imported for sale to the public in air-tight tins or containers	,, ...	1 10 ...	1 00
(ii) not otherwise provided for	,, ...	80	
III.—Petroleum :			
(*a*) Kerosene with a flashing point higher than 73°F but below 200°F	Per gallon ...	05	
(*b*) Petrol	,, ...	35	
IV.—(*a*) Sugar, including sucrose, saccharose, cane sugar, beet sugar, palm sugar gula malacca, gula kabong, gula nipah, gula kachang, jaggery, sugar candy, sugar cane, molasses, treacle, golden syrup, maple syrup, dextrose, glucose, grape sugar, starch sugar, corn sugar, starch syrup, corn syrup, wheat syrup, wheat jelly, rice jaggery, laevulose, fructose, fruit sugar, invert sugar, honey lactose, milk sugar, maltose and malt sugar	Per pound ...	02	
(*b*) Sweets, chocolates, confectionery, and any other products containing more than sixty parts per centum by weight of any one or more of the sugars enumerated under IV (*a*)	,, ...	05 ...	03
Exemptions—			
(i) Sweets, chocolates, and confectionery in manufacturers' unopened original tins, bottles, cartons or boxes containing not more than two pounds nett weight.			
(ii) Articles which are dutiable under any other paragraph of Table A.			

		Rates of duty.	
Description of goods.	Unit.	Full duty.	Preferential duty.
		$ c.	$ c.
V.—Cartridges other than such as are included in section 19 of the Explosives Enactment	Per 1,000	1 00	Free
VI.—Matches :			
Containers with—			
(i) not more than 10 matches	Per 100 containers	12	
(ii) more than 10 but not more than 20 matches	,,	24	
(iii) more than 20 but not more than 50 matches	,,	60	
For every additional 25 matches or part of 25 matches over 50 in a container, a duty additional to the duty under (iii)	,,	30	
VII.—Edible oils and fats :			
(a) (i) Kachang and ground-nut oil	Per pound	04	01
(ii) Gingelly oil	,,	02	Free
(b) Butter, tinned	,,	04	Free
(c) ,, frozen	,,	04	Free
(d) Magarine	,,	05	Free
VIII.—Cement	Per ton	12 00	6 00
IX.—Cement manufactures other than tiles	,,	2 00	
X.—Tiles :			
(i) Roofing	,,	12 00	
(ii) Flooring and wall	,,	12 00	10 00
XI.—Cosmetics and perfumery	*Ad valorem*	25%	Free
XII.—Textiles and apparel :			
(a) Piece goods made of silk, cotton, linen, artificial silk and all mixtures made of cotton, linen, artificial silk, silk and, or, other materials	*Ad valorem* or per yard	20% or 5 cents per yard whichever is higher	10% or 2¼ cents per yard whichever is higher
(b) Cotton, linen, jute, silk or artificial silk, felt, flannel, woollen and all textile goods made from plant fibres, whether finished goods or not, other than yarn, thread, gunnies and waste, except as provided in (a) above	*Ad valorem*	20%	10%

Description of goods.	Unit.	Rates of duty.	
		Full duty.	Preferential duty.
		$ c.	$ c.
XII.—Textiles and apparel—(*cont.*)			
(*c*) Wearing apparel not otherwise provided for, including boots, bootees, shoes, overshoes, slippers and sandals of all descriptions and of whatever material finished or unfinished, other than articles specified in the next following item	*Ad valorem*	20%	10%
(*d*) Boots, bootees, shoes, overshoes, slippers and sandals of all descriptions made wholly or partly of rubber, balata or gutta-percha (except where the outer part of the uppers, apart from stitchings, fastenings or ornaments, is made entirely of leather or leather and elastic)	Per pair	50	10
(*e*) Rubber soles	,,	25	05
XIII.—Tanned hides and skins, leather and imitation leather, leather and imitation leather manufactures other than fancy goods	*Ad valorem*	10%	Free
XIV.—Cycles and accessories:			
(*a*) Cycles—complete	Each	4 50	1 50
Saddles	,,	30	10
Frames—complete	,,	3 00	1 00
Frames—parts of	Per piece	15	05
Handlebars—with fittings and otherwise	Each	30	10
Rims	,,	30	10
Chains	,,	30	10
Cycle pumps	Per dozen	30	Free
(*b*) Cycle tyres (outer covers)	Per cover	15	08
,, inner tubes	Per tube	06	03
(*c*) Motor and motor-cycle tyres (outer covers)	*Ad valorem*	20%	Free
(*d*) Motor and motor-cycle inner tubes	,,	20%	Free

Description of goods.	Unit.	Rates of duty.	
		Full duty.	Preferential duty.
		$ c.	$ c.
XV.—Musical instruments other than pianos, wireless receiving and transmitting sets and parts thereof including gramophones, electrical gramophones or reproducers, phonographs, records, needles, valves and other parts or accessories	*Ad valorem*	10%	Free
XVI.—Coffee		—	—
XVII.—Ground-nuts	Per pound	00¾	Free
XVIII.—Milk (including cream), condensed, desiccated or preserved	For 100 lbs. nett weight	4 00	Free
XIX.—Fruits, vegetables (including mushrooms and all edible fungi) and fish in metal, glass, or earthenware containers	*Ad valorem*	15%	Free
XX.—Printing paper	,,	10%	Free
XXI.—Manufactured brass, bronze, and copperware	,,	15%	5%
XXII.—(*a*) Batteries and parts thereof for electric torches or handlamps	,,	15%	Free
(*b*) All other electric batteries and parts thereof	,,	15%	Free
XXIII.—Paraffin wax and articles made thereof	,,	15%	5%
XXIV.—Fish maws and sharks' fins	,,	10%	Free
XXV.—Umbrellas and lamp-shades covered with silk, artificial silk or cotton	,,	5%	Free
XXVI.—Tea	Per pound	08	06
XXVII.—Saccharine	,,	5 00	
XXVIII.—Fireworks and crackers	,,	10	

TABLE B.

EXPORT DUTIES.

I.—AGRICULTURAL PRODUCTS.

Description of goods.	Duty.
(*a*) Gambier	15 cents per pikul
(*b*) Gutta-percha (cultivated) meaning gutta-percha produced from any of the following trees which have been cultivated on alienated land to the satisfaction of the Commissioner :	
(i) Getah Sundik, Payena Leerii sp.	2½ per cent. *ad valorem*
(ii) Getah Simpor, Palaquium sp.	
(iii) Getah Puteh, Palaquium sp.	
(iv) Getah Taban, Palaquium oblongifolium	
(v) Getah Taban, Merah, Palaquium gutta	
(vi) Getah Taban Sutra, Palaquium gutta	
(vii) Getah Taban Puteh, Palaquium ovatum	
(viii) Getah Taban Chaier, Palaquium pustulatum and all other kinds of Getah Taban	
(*c*) Rubber—	
When the price of rubber as notified for the time being in the *Gazette* is under 20 cents per pound	A duty of 1 per cent. of the value of the rubber calculated at the price so notified
When the price is 20 cents or over but under 22 cents per pound	A duty of 1½ per cent. of the value of the rubber calculated at the price so notified
When the price is 22 cents or over but under 24 cents per pound	A duty of 1¾ per cent. of the value of the rubber calculated at the price so notified
When the price is 24 cents or over but under 26 cents per pound	A duty of 2 per cent. of the value of the rubber calculated at the price so notified
When the price is 26 cents or over but under 28 cents per pound	A duty of 2¼ per cent. of the value of the rubber calculated at the price so notified

Description of goods.	Duty.
(*c*) Rubber—(*cont.*)	
When the price is 28 cents or over but under 30 cents per pound	A duty of 2½ per cent. of the value of the rubber calculated at the price so notified
When the price is 30 cents or over but under 35 cents per pound	A duty of 3 per cent. of the value of the rubber calculated at the price so notified
When the price is 35 cents or over per pound	A duty of 3½ per cent. of the value of the rubber calculated at the price so notified

II.—FOREST PRODUCTS.

Description of goods.	Duty.
(*a*) Rembia ataps	10 per cent. *ad valorem*
(*b*) Nipah ataps—	
(i) Bertindeh tulang	$1.50 per 1,000
(ii) Bertumu tulang	$1.00 ,,
(iii) Bertumu daun	.75 ,,
(iv) Other kinds	10 per cent. of the wholesale prices in the centres of production
(*c*) Getah rambong (India-rubber) ...	$5.00 per pikul
(*d*) Formosa camphor	10 per cent. *ad valorem*
(*e*) Kepong bark	10 ,, ,,

III.—MINERALS, METALS AND METALLIFEROUS ORES.

Description of goods.	Duty.
(*a*) Tin-ore—	
When the price of tin does not exceed $41 per pikul	$2.40 per pikul
When the price of tin exceeds $41 but does not exceed $42 ...	$2.52 ,,
When the price of tin exceeds $42 but does not exceed $43 ...	$2.64 ,,
and so on, the duty per pikul being increased by 12 cents per every dollar by which the price of tin exceeds $41.	
In the case of tin-ore exported otherwise than under such guarantees as the High Commissioner may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul.	

Description of goods.	Duty.
(b) Tin, smelted or manufactured from tin-ore won in the Federated Malay States	On the same scale as that for tin-ore, together with an additional duty of one-third of the duty on tin-ore
(c) Additional duty on all tin-ore exported	5 cents per pikul or part of a pikul
(d) Tin slag and hard-head of tin ...	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smelted or manufactured on the amount of tin estimated to be contained in such consignment
(e) Scheelite	$2 per pikul
(f) Wolfram	$2 ,,
(g) All other metals and metalliferous ores excluding gold	10 per cent. *ad valorem*
(h) China-clay or kaolin	75 cents per ton
(i) Potash-felspar or soda-felspar intended for use as a flux or a glaze	2½ per cent. *ad valorem*
(j) China-stone	2½ ,, ,,

IV.—MISCELLANEOUS.

[(i) *Perak, Selangor and Negri Sembilan only.*]

Description of goods.	Duty.
(a) Blachan	50 cents per pikul
(b) Fish, dried and salted	10 per cent. *ad valorem*
(c) Fish maws, fish refuse, ikan gelama, prawns (dried)	10 ,, ,,
(d) Oysters, fresh	$5 per pikul
(e) Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins	10 per cent. *ad valorem*
(f) Horns, tanned skins, raw or dressed hides, bones and tallow...	10 ,, ,,

[(ii) *Pahang only.*]

Description of goods.	Duty.
(*a*) **Fish dried—**	
Class A (i) Sharks' fins	$1.50 per pikul
,, A (ii) Tenggiri, ikan merah, kachang, selor, bileh, bawal, talang	.75 ,,
,, B Selor kuning	.60 ,,
,, C Pelata, gelama, selor puchat, lema	.50 ,,
,, D Kembong, Khe'kheh, selayang	.40 ,,
,, E Tamban, udang, blachan, ikan yu	.30 ,,
,, F Tampai, layor, para, duri, bakau, budu and all other fish not mentioned above	.15 ,,
(*b*) Oysters, dried, mother-of-pearl shell and beche-de-mer	10 per cent. *ad valorem*
(*c*) Horns, tanned skins, raw or dressed hides, bones, and tallow	10 ,, ,,

[(*iii*) *All States.*]

Description of goods.	Duty.
Elephants	20 per cent. *ad valorem*

EXCISE DUTIES.

Chinese samsu including medicated samsu	$9 per proof gallon		
Other intoxicating liquors	$11 ,, ,,		
All intoxicating liquors manufactured in the Federated Malay States by the Nipah Distilleries of Malaya Limited	$9 ,, ,,		
Matches :			
Containers in which there are—		A.	B.
(i) not more than 10 matches	Per 100 containers	9 cents	8 cents
(ii) more than 10 but not more than 20 matches	,, ,,	18 ,,	16 ,,
(iii) more than 20 but not more than 50 matches	,, ,,	45 ,,	40 ,,
For every additional 25 matches or part of 25 matches over 50 in a container : a duty additional to duty under (iii)	,, ,,	22½ ,,	20 ,,

The rates in column "A" apply where both the matches and the containers are made from imported timber.

The rates in column "B" apply where both the matches and the containers are made from local timber.

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—

(*a*) On sale of any property (except stock, shares and marketable securities).—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

(*b*) Of any stock, shares or marketable securities.—Ten cents (or 30 cents in certain cases) for every $100 or part of $100 of the value thereof on date of the transfer.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVII.

Miscellaneous.

ELECTRICAL DEPARTMENT.

The demand for electrical energy continued throughout 1937 owing to the improvement in general industrial conditions, and additional generating plant in the larger power stations was installed and further extensions are on order to meet the ever increasing demand.

The total number of units generated in the Federated Malay States during the year was 520,970,014, as compared with 446,794,999 in 1936, an increase of 16.6 per cent.

The above units for 1937 were generated by the following prime movers:

—	Perak.	Selangor.	Negri Sembilan.	Pahang.	Total.
Water-wheels ...	215,572,982	13,212,218	...	6,140,224	234,925,424
Steam Plant ...	128,124,830	100,082,406	...	...	228,207,236
Oil Driven ...	31,001,714	10,584,847	2,207,517	13,978,812	57,772,890
Gas Ergine ...	...	...	64,464	...	64,464
Total ...	374,699,526	123,879,471	2,271,981	20,119,036	520,970,014

Of this total the units generated by Government Power stations and power stations termed "Public and General" are as follows:

State.	Government supplies.	Public and general supplies.	Total.
Perak	2,322,356	372,377,170	374,699,526
Selangor	86,396,942	37,482,529	123,879,471
Negri Sembilan ...	1,825,517	446,464	2,271,981
Pahang	468,572	19,650,464	20,119,036
Total 1937 ...	91,013,387	429,956,627	520,970,014
Total 1936 ...	83,080,165	363,714,834	446,794,999

The energy consumed for various purposes may be classified as follows:

State.	Tin Mining.	Gold Mining.	Coal Mining.	Other Uses.
Perak	366,519,484	...	...	8,180,042
Selangor	85,739,951	...	8,701,607	29,437,913
Negri Sembilan	...	...	...	2,271,981
Pahang	14,911,122	4,384,040	...	823,874
Total 1937 ...	467,170,557	4,384,040	8,701,607	40,713,810

PERAK.

Ipoh.—The energy for this Government undertaking is purchased from the Perak River Hydro-Electric Power Company. During the year 3,966,499 units were purchased as compared with 3,492,664 in 1936.

The number of new consumers connected to the supply mains during the year was 234, bringing the total number connected at the end of the year to 4,527.

The maximum load observed under normal conditions was 1,267 kilowatts and the load factor was 35.76 per cent.

Taiping.—The number of units generated during the year amounted to 2,171,273, an increase of 13.43 per cent. over the previous year.

The maximum load observed under normal conditions was 620 kilowatts and the load factor was 39.98 per cent.

The total number of consumers connected to the supply system at the end of the year was 1,985, an increase of 135 consumers as compared with the previous year.

SELANGOR.

Kuala Lumpur.—The total number of units delivered by the Bungsar and Ulu Langat power stations exceeded the total for 1936 by 6,303,568, or an increase of 8.81 per cent.

Orders have been placed for additional generating plant and boilers for the Bungsar Power Station and it is anticipated that this will be in commission early in 1939.

The number of consumers connected to the supply system at the end of the year was 9,356, representing a total connected load of 27,435 kilowatts.

The maximum load observed was 15,340 kilowatts and the yearly load factor was 62.63 per cent.

Progress in some of the other larger Government undertakings is indicated as follows:

Town.	Units generated or purchased.	Maximum load observed.	No. of consumers at the end of the year.	Total connected load in K.W.
Klang	2,235,407	586 K.W.	1,410	2,214
Seremban	1,397,740	637 ,,	1,887	1,878
Kuala Lipis	272,419	110 ,,	399	366
Batu Gajah	286,643	116 ,,	433	338

During the year celebrations were held in honour of the Coronation of His Majesty King George VI. Government buildings were flood-lit in all the larger towns, and magnificent arches were erected, handsomely decorated and illuminated, by the various public communities.

Maximum loads were observed in power stations of from 20 to 50 per cent. above normal to meet the demand for supplying the illuminations.

COMPANIES.

Companies incorporated in the Federated Malay States are termed local, and all other companies incorporated in Straits Settlements, British Empire and elsewhere, having places of business in the Federated Malay States, are termed foreign.

Local Companies.—Eighty new companies were registered in 1937 with total nominal capitalisation $10,755,857 as compared with the corresponding figures 34 and 24 with $9,125,156 and $5,041,642 in 1936 and 1935 respectively.

Of the 80 new companies, 50 were motor transport companies with total nominal capitalisation $3,345,000, which were rushed into being as a result of the new Transport Board Enactment. The main objects of the others are: agency (1), aerated water manufacturers (1), amusement and entertainment (1), dispensers and medicine dealers (1), engineering (1), general merchants (2), miners and planters (2), mining (5), money-lending (1), newspaper printers (1), planters (2), printers (1), rubber dealers (2), rubber planters (3), tin mining (4), and trust and investment (1).

Four hundred and forty companies were on the registers at the end of the year.

Foreign Companies.—Fifteen new companies were brought on to the Federated Malay States registers during the year as compared with 23 and 23 in 1936 and 1935 respectively.

The main objects of the new companies are chemical manufacturers (1), engineering (2), general merchants (2), mining (1), motor insurance (1), newspaper printers (1), rice merchants (1), rubber planters (4) and tin mining (2).

Seven hundred companies were on the registers at the close of the year.

At the close of the year on the registers were 72 insurance companies, of which, 44 are transacting fire insurance only, 13 are doing life assurance, ten are conducting both fire and life insurance and five are underwriting insurance business other than fire and life assurance. All the 72 insurance companies are foreign companies.

Enactment No. 22 of 1937, which amends the Companies Enactment, has given greater control to Government over all banking companies operating in the Federated Malay States. There are 14 banking companies in the Federated Malay States. Of these, two were already granted licences prior to 1st January, 1937. During the year, 12 licences were issued:

> Three unrestricted, for foreign companies of repute;
>
> Three restricted, for local companies with conditions forbidding the business known in Tamil as "Kuttu" and in Chinese as "Wui" or the managemet of any arrangement whereby persons pay regular subscriptions which are made available to each of them in turn in a manner determined by some contingency;
>
> Six banks, not carrying out general banking business in the Federated Malay States were given licences to maintain places of business solely for the purpose of contracts.

Liquidation.—Twenty-three local companies were in voluntary liquidation at the end of 1937, and in the case of ten proceedings commenced in 1937. There was one company in compulsory liquidation at the close of the year, the order of Court for which was made prior to 1937. As to foreign companies, the corresponding figures for voluntary liquidation were 20 and 11.

One thousand seven hundred and thirty-one documents concerning local companies and one thousand four hundred and fifty-one concerning foreign companies were registered.

BANKRUPTCY.

During the year 34 bankruptcy notices and 19 bankruptcy petitions were filed; 21 receiving orders and 20 adjudication orders (against 21 persons) made as compared with 99 bankruptcy notices, 65 bankruptcy petitions, 46 receiving orders and 45 adjudication orders in 1936.

Of the persons adjudged bankrupt, nine were Chinese, eight Indians, two Eurasians, one Ceylonese and one Malay. By occupation five were traders, three landowners, two miners, two Government pensioners, one money-lender, one clerk, one dhobie, one watchman, one amusement caterer, one shop assistant, one tindal, and one lorry-driver; the remaining one was a widow.

Trade bankruptcies showed a marked decrease in Selangor: three (under two receiving orders) as against nine in 1936; while Perak and Negri Sembilan remained at one each.

The main bankruptcy office is in Kuala Lumpur and the branch office in Ipoh.

Twelve compositions were accepted by creditors during the year. There were 19 discharges of which three were absolute discharges, 16 subject to various periods of suspension and consent to judgment.

On 31st December there were 573 undischarged bankrupts and 660 debtors under the wage-earner's administration orders.

There were nine prosecutions against bankrupts or debtors during the year for offences under the Enactment. In seven cases the offenders were convicted and fines ranging from $3 to $30 with the alternative imprisonments from two weeks to one month were imposed.

The gross liabilities and assets as stated by the bankrupts were $283,348 and $63,767 respectively as compared with $575,938 and $281,189 in 1936. These so-called assets consist chiefly of book debts which have been carried forward from year to year for a very long time and which the debtor himself over a considerable period with every advantage of specialised local and commercial knowledge and spurred on by financial embarrassment has himself failed to realise. Recovery of these book debts is well-nigh impossible because the debts are either barred by limitation or the whereabouts of the debtors to estates are unknown. There was one failure with estimated liabilities of over $100,000 but under $120,000, one of over $50,000 but under $60,000, one of over $25,000 but under $30,000; two of over $15,000 but under $20,000 and two of over $10,000 but under $15,000.

The decline in trade bankruptcies is no doubt due to the improved trade conditions.

This is the second year since the introduction of the legislation dealing with wage-earners which came into force in August, 1936, as Enactment No. 14 of 1936 amending the bankruptcy Enactment (Cap. 55). Five hundred and fourteen wage-earners administration orders were made in 1937, of which 475 were against Government employees. The number in 1936 was 153 of which 118 were Government employees.

The total revenue for the year was $22,651 and the total expenditure was $30,437.

Department of the Public Trustee and Official Administrator.

The year under review was the fifteenth year of the working of the department of the Public Trustee.

During the year the Public Trustee accepted 34 trusts in all valued at $633,000. Twenty-two trusts were wound up, and at the end of the year 110 were still being administered.

The value of the property held in trust by the Public Trustee at the end of the year is estimated at $3,450,000.

The office of the Official Administrator, Federated Malay States, created in the year 1928 is combined with that of the Public Trustee. The number of estates taken up by the Official Administrator during 1937 was 42 valued at $609,000. Thirty-two estates were wound up and at the end of the year 78 were still being administered.

The total number of trusts and estates administered by the Public Trustee and Official Administrator as at 31st December, 1937, was 188 valued at over $4,670,000. The total fees collected by the combined offices during the year amounted to $54,808.68.

CO-OPERATION.

Expenditure.—The total expenditure for the calendar year was **$126,430.**

Progress.—The position at the end of the year was as follows:

Type of society.	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit	60	1,903	72,063	14,578	92,837
Registered, but not working	1				
Seasonal Credit ...	12	204	1,478	...	1,478
General Purposes (Malay)	35	4,997	...	764	21,278
Urban Thrift and Loan	37	16,849	4,031,100	297,724	4,412,724
Registered, but not working	2				
Indian Labourers' ...	243	51,394	1,177,036	5,485	1,182,521
Registered, but not working	3				
Indian Labourers' Unions	3	15*			
Better Living ...	3	123			
General Purposes (Indian)	2	79	4,069	...	5.178
Marketing	5	84	196	103	630
Fairs	5	138			
Stores	2	358	8,466	139	8,605
Urban Co-operative Union	2	12*			
Totals ...	415	76,129†	5,294,408	318,793	5,725,251

Rural Credit Societies.—During most of 1937, the prices of rural products were fairly satisfactory, though there was little or no change in the price of padi. As a result, there was a very general improvement in the financial condition of rural credit societies. Membership increased by 272 and paid-up share capital by $3,880. It was, however, in the transactions that the most noticeable change occurred. Members made more use of their societies than they have done for six years. The societies financed their members to the extent of $30,824 and repayments on account of principal amounted to $27,970. Overdue loans were reduced by $5,450 and the percentage of overdue loans to outstanding loans fell from 76 to 64. In this respect progress was disappointing, but 37 per cent. of the overdues are amongst the padi planters of Krian who did not enjoy any increase in the price of their crop. Most of these overdues are in respect of pre-depression loans granted when prices were high. Their liquidation presents a serious problem at present prices. Progress is, however, steady and continuous. Outside the padi areas there was much more activity, and loans have been given with greater care and wisdom. As a result, very few borrowers are in arrears in respect of loans which have been approved in the last year or two. There is a very general feeling amongst members that they weathered the depression better than did their neighbours who were not members.

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* Societies. † Societies not included.

Seasonal Credit Societies.—The four seasonal credit societies amongst padi planters functioned successfully and repaid the whole of their borrowings as soon as they had sold their crop in 1937. These societies had been under observation by representatives of neighbouring kampongs with the result that after harvest eight more societies were formed, making a total of twelve, with a membership of 204 and a paid-up share capital of $1,478. The idea is spreading and, at the end of the year, nine more groups had more or less decided to apply for registration after the next harvest. These seasonal credit societies represent another effort to organise the padi planter to provide himself with sufficient finance between planting and harvest, so that he will not be driven to sell forward his crop at a low rate. The first year's experience has been very successful and raises hopes of wide development in the future.

General Purposes Societies (Malay).—The number of these societies only increased by one from 34 to 35, but the membership increased from 4,290 to 4,997. It must be admitted, however, that some of these are members in little more than name. The place of thrift in these societies is growing and the results are encouraging. The deposits standing to the credit of members at the end of the year totalled $20,514 as against $11,062 at the end of the previous year. This does not represent a large saving per head, but, seeing that the sum is collected in many deposits of small amounts, it does represent an advance in the introduction of thrift to the ra'ayat. One society, after tutelage as a general purposes society, applied to be transformed into a rural credit society. This was duly done.

Marketing Societies.—There is little new to report concerning marketing societies. The five egg-marketing societies had a very difficult year. It is normal for the kampong price of eggs to exceed the price paid by the egg-marketing societies during three months in the year. In 1937, however, owing to the general rise in price of commodities, the kampong price was higher than the societies' price during a considerable portion of the year. As a result, the number of eggs sold by the societies fell from 314,034 to 133,487. The monthly average price paid by the societies was $1.99 per hundred while the monthly average kampong price was $2.12. Towards the end of the year, there was a tendency for the pendulum to swing the other way.

So long as the price of rubber was comparatively high, small holders preferred to live on the sale of their coupons and only tapped their trees when their coupons were exhausted. No progress was made in the joint sale of rubber. A number of societies did, however, combine to sell coupons. Altogether 206 pikuls and 95 katies were deposited for sale and the total of $3,360.82 was credited to members.

Co-operative Shops.—The co-operative store run by Malays in Ulu Langat continued to function and had sales totalling $9,158 as against purchases totalling $8,682. It has now been registered for two years and is well supported by its 176 members.

The only other registered co-operative store is the Negri Sembilan Co-operative Stores Society in Seremban. The membership of 182 is composed largely of salary earners and pensioners. The first full month of business was April and in the nine months of the year the average sales totalled $2,812 a month. The paid-up shares amounted to $7,605. This store has made a promising start.

In addition to these, there are other stores in rural areas which are run on more or less co-operative lines, but are not registered as co-operative societies. The most successful are those at Kota Bharu and Pengkalan Pegoh in the Kinta district which had sales during the year amounting to $11,864 and $6,356 respectively.

Salary Earners' Societies.—The number of these societies increased by three to 39 of which two were not yet working. Membership increased by 400 to 16,849 while share capital totalled $4,031,100, an increase of $411,100. The balance of deposits for anticipated future expenditure increased from

$61,000 at the end of 1936 to $83,900 at the end of 1937. The total of loans (principal) repaid at $1,426,800 exceeded the total of loans granted by $65,100. Overdue loans amounted to only $2,100, while reserve funds totalled $297,724.

Thrift through the medium of these societies is steadily growing. Local trustee securities were not always available and societies increased their holdings of British War Loan from $119,783 to $251,372. The investments in trustee securities and deposits in the Post Office Savings Bank increased by $416,533 to $3,179,966.

Societies Amongst Indian Labourers.—The largest increase was in societies amongst Indian labourers which numbered 246 as against 194 in 1936. In addition, there were three unions of societies. Three societies, though registered, had not started work at the end of the year. Membership increased by 19,666 to 51,394 while paid-up subscriptions increased from $701,091 to $1,177,036—an average of $22.90 each. The wages of Indian labourers were increased at the beginning of the year and a portion of the increase found its way into the societies. In the year ended June 30th, 1937, loans totalling $83,650 were granted to members, of which $30,167 were for remittances to India. More than half the societies had not yet started issuing loans.

Most of these societies keep their funds in the Post Office Savings Bank in which they held $487,513 at the end of the year. In addition, they had $640,896 invested in trustee securities.

The increase in societies is largely attributable to the fact that an additional officer was stationed in Perak.

Rural Lecture Caravan.—The rural lecture caravan, which is operated jointly by the Department of Agriculture, the Rubber Research Institute and the Co-operative Societies Department, completed nine tours in the Federated Malay States during the year. The estimated attendance was 92,150. No new propaganda films were made, but two short composite films, somewhat in the nature of news-reels, were made and issued to the caravan. These films contained scenes of co-operative activities, such as co-operative sports meetings, schools and madrasahs repaired by co-operators, and collection and despatch of eggs by marketing societies in Krian.

LANDS.

The area in private occupation at the end of the year amounted to about 2,607,685 acres under agricultural titles and 213,756 acres under mining titles.

It is estimated that of the 27,540 square miles covered by the four States of the Federation, 16 per cent. is land in private occupation and 27.7 per cent. is reserved forest, while the balance of 56.3 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

The transfer of the Meteorological Branch to the Straits Settlements administration from the 1st January contributed to a reduction of the total expenditure (inclusive of payments to the Malayan Establishment Office) of the Survey Department to $730,329, about $80,000 less than in 1936. If the cost of the Meteorological Branch is excluded from the comparison expenditure shows an increase of $5,334.

Beyond the normal precise levelling programme no field work was undertaken by the Trigonometrical Branch in the Federated Malay States. Automatic tide gauge observations which will be of value in the final adjustment of the precise levelling of the Federated Malay States were continued at Singapore and Penang. Computations of the Brunei triangulation and precise traverses were completed, the cost, of course, being recovered from the Brunei Government.

The Topographical Branch which, though a Federated Malay States organisation carries out surveys on repayment for other administrations, completed the revision of the four-inch to one mile survey of Singapore Island and the 10-inch to one mile map of the Singapore municipal area. Seven hundred square miles were surveyed on the standard one inch to one mile scale in Johore and four hundred square miles in Pahang and Trengganu. In the course of the latter survey sufficient data were collected for the definition of some 52 miles of the Pahang-Trengganu boundary.

In the Revenue Branch the demand for surveys for titles again shows an increase. Requisitions were received for 8,199 lots compared with 7,239 lots in 1936. This increasing demand has necessitated augmenting the number of field parties employed. Six thousand five hundred and twenty-seven lots were surveyed and 12,512 lots completed in the office but of the latter 4,127 lots were completed for and at the cost of the Government of Johore.

During the year some seventy-six Asiatics were recruited at the request of the Sarawak Government for survey and assessment work in that country in preparation for the introduction of a new system of rubber regulation.

The Map Production Branch continued to produce the coupons required for rubber regulation. During 1937 nine million Malayan and 345,000 Sarawak coupons were printed, bringing the total to over 34 million. It is satisfactory to be able again to record that no forgery made its appearance during the year. Among the more interesting productions of this branch were the Coronation illuminated addresses for the Federated Malay States, Straits Settlements, Kedah, Perlis, Trengganu and Brunei.

GEOLOGY.

New appointments brought the number of geologists in the Geological Survey Department to four, including the Director, and three additional posts were sanctioned but not filled at the end of the year. Detailed field-work was done in the Batang Padang district of Perak, in that part of the gold belt in Pahang which lies north of Raub, and in Ulu Selangor, and satisfactory progress was made in the resumed investigation of the mineral resources of the Federated Malay States.

As usual, reports were made on mineral deposits for Government and miners and prospectors, and on the geological aspect of certain engineering schemes for the Public Works Department, for the Royal Air Force, for His Majesty's Naval Base, and for the Malaya Command. Requests for reports on problems outside the Federated Malay States are usually complied with, because of the information gained about possible similar occurrences within our own territory, but where it is likely that no such useful comparison can be made, it sometimes happens that the time required for furnishing such reports cannot be spared from geological survey work in the Federation.

Enquiries were answered about water-supply and about minerals as well as about materials for various manufactures. Many minerals and rocks were received for identification, a service provided free of charge if the specimen is from the Federated Malay States, and if the exact locality is disclosed. In cases where the material comes from outside, or where the Federated Malay States locality is kept secret, a small charge is made. During the year a large number of "Banka Drill" bore-samples were examined, with the particular purpose of determining if bedrock had really been reached by the prospector, or if there remained the possibility of the occurrence of tin-bearing alluvium below the lowest depths reached by the bores.

Two hundred and sixty-eight additions were made to the collection of records of prospecting results kept in the head office of the Geological Survey in Batu Gajah. The usefulness of the collection is yearly becoming more apparent. It gives immediate access to all the information known about mineral deposits, and is frequently consulted by Government and by miners. It was used to supplement the geological information in the other departmental records in preparing maps of Perak and Selangor showing probable and possible new tin-producing areas.

Prospecting is done by persons of varying skill and experience, and there may be much advantage in having results scrutinised by a geologist. In February, the dredge on the South Kampar section of the property owned by South Kinta Consolidated was digging alluvium underlain by red clay that was identified as weathered metamorphosed shale. East of the red clay the bedrock was crystalline limestone; the bore plan contained in the collection of prospecting results stated that the bedrock on its west side was decomposed granite overlain by unpayable alluvium. Actually, it was observed that the dredge buckets were bringing up alluvial clay from a depth greater than that where this granite bedrock was said to be and it was realized that a mistake had been made years ago by the prospector and that there was deep alluvium on the west side of the metamorphosed shale. Advice was given to the company that there might be a belt of payable deep tin deposits in this ground previously described as useless, that the matter was important, and that the deposits should be tested by deep bores. Boring was carried out on the South Kampar and Changkat leases, as a result of which an area of deep tin deposits was disclosed, and a new dredge has now been ordered capable of digging to 130 feet below water level.

Vertical veins of jet-black coal, one inch to three inches thick and one hundred yards in length have been discovered in alluvium near Tapah Road, Bidor, Malim Nawar and Taiping. The first locality was prospected thoroughly by Malayan Collieries, Limited, and found to be useless as a commercial source of coal, and no attention need be paid to the economic possibilities of any coal of this nature. However, the fact that coal of quality comparable with that at Batu Arang can occur as vertical veins in recent alluvium is a matter of considerable interest. In one tin mine, a vein extended down from the soil to pass through the bark of a piece of wood in a layer of peat, through eight or ten feet of alluvium, and then, strange to say, through ten feet of phyllite bedrock of Permocarboniferous age. The coal must be of recent age, only one thousand years or so, and yet it occurs as veins in this very ancient bedrock. The occurrence is a puzzle that has not yet been explained.

A memoir entitled "The Geology of the Neighbourhood of Sungei Siput, Perak, Federated Malay States" by H.E.F. Savage was published, illustrated by photographs and by a coloured geological map on the scale of one inch to a mile. Collections of Malayan minerals and rocks were presented to schools and other institutions. All assays and analyses of minerals and metals for the Government and for the public were done by the Geological Survey Department at their laboratory in Batu Gajah. The fees charged for assays and other laboratory examinations were reduced to one half for samples that could be certified as having originated from localities within the Federated Malay States. The appointment of an additional chemist has been sanctioned, to make two in all.

PLANTERS LOANS BOARD.

Agricultural Loans.—On 1st January, 1937, the Board had on its registers fourteen loans aggregating to $424,173.

Seven properties repaid their loans in full to the extent of $207,735 during the course of the year while five others made partial repayments totalling $33,129.

At the end of the year, the number of agricultural loans thus was reduced to seven totalling $183,309.

Urban Loans.—Urban loans, at the beginning of the year, totalled forty-two amounting to $232,118.

No new loans were created during the year.

Repayment in full was made by fourteen borrowers to the extent of $75,640 while twenty others made partial repayments totalling $22,223.

At the end of the year, the number of urban loans was twenty-eight aggregating to $134,255.

War Service Loans.—Under the War Service Land Grant Scheme, at the beginning of the year, fifty-three ex-soldiers were indebted to the Board in respect of loans made to them to the extent of $997,185.

During the course of the year, twenty-five repaid their borrowings in full to the extent of $367,231 while partial repayments totalling $87,739 were made by twenty-one others.

At the end of the year, therefore, the number of borrowers continuing to benefit under the scheme was twenty-eight, the amount outstanding totalling $542,215 to which falls to be added $79,441 being advance to properties under the Board's administration giving a gross sum outstanding of $621,656.

Interest.—Interest earned during the year amounted to $69,801 of which $19,615 was in respect of agricultural loans, $14,463 in respect of urban loans and $35,723 in respect of War Service loans.

Interest collected totalled $144,802 while interest credited to Federal revenue in respect of all monies outstanding was $135,826.

Profit and Loss.—The net profit earned by the Board during the year was $24,618.

Reserves.—The reserves of the Board at 31st December, 1937, stood at $857,886.

Capital.—The capital of the Board is $4,000,000 created by the Planters Loans Fund Enactment (Cap. 131 Revised Laws).

THE ESTATE DUTY OFFICE.

The total of estate duty collected throughout the Federated Malay States in 1937 was $742,070 as against $406,310 in 1936 and $288,286 in 1935. The large increase in revenue over that of 1936 is mostly due to the more systematic examination and investigation to which estates are now subjected.

There were 656 affidavits lodged during 1937 and of this number 168 were valued at $1,000 or under and were therefore certified as exempt from payment of estate duty. There were three estates in which duty was assessed at over $50,000 during 1937.

Valuation of immovable properties continued to be a difficult problem during the year.

The amount of revenue assessed and calculated during previous years but remaining unpaid on 31st December, 1937, was $569,324 of which $48,777 has been collected during January, 1938. This sum includes interest up to the end of 1937.

Several cases of attempted evasion of duty were discovered during the year, the *modus operandi* of which was the transferring of immovable property registered in the name of the deceased, by means of powers of attorney null and void by the death of the donor.

There were 158 investigation papers registered during 1937 as against 124 in 1936 and the activity in this direction is having effect. There were 43 cases in which the death of a partner in a partnership was reported to the Collector under section 43 of the Estate Duty Enactment as against 32 in 1936. Prior to 1936 no cases were reported under this section.

MILITARY.

The 1st Battalion, 2nd Punjab Regiment, carried out normal duties and training in Taiping during the year, and did two periods of training in Singapore where it took part in the combined operations in January and February.

In March, 1937, two companies proceeded at short notice to Kuala Lumpur on duty in connection with the strikes.

The strength of the Battalion on the 31st December, 1937, was:

British Officers	12
Viceroy's Commissioned Officers	18
Indian Other Ranks	712

MALAY REGIMENT.

The Malay Regiment reached its final strength except for Malay Officers at the end of 1937, the figures being as under:

British Officers	17
,, Instructors	11
Malay Officers	6
,, Other Ranks	764

The Regiment was represented at the Coronation of H.M. King George VI by a British Officer, two Malay Officers and two Malay Other Ranks.

Detachments of the Regiment were called upon to assist during the labour troubles in the Federated Malay States in March, 1937.

A detachment took part in the Singapore Tattoo during August, 1937.

A detachment of one Platoon under a British Officer marched through Trengganu in September, 1937, and camped at various places in that State.

The standard of performance of the Regiment is high.

VOLUNTEERING.

The year under review has been one of transition rather than training, and although the latter has been by no means neglected the interest of staff and volunteers has been centred in putting into operation the scheme of reorganisation that was approved by the Federal Government at the end of 1936.

At the beginning of 1936 it was apparent that the growing strategical importance of the Federated Malay States demanded a better organised and more easily trained force than the old individual company system permitted. It also necessitated an increase in strength. To achieve this it was considered necessary:

(*a*) Not only to give the infantry in each State a full Battalion Headquarters establishment, but also to knit more closely the different units within the State, to ensure in peace that co-operation and understanding which is so essential in war.

(*b*) To re-group the drill centres of the smaller units with a view to concentrating companies as much as possible.

(*c*) To widen the field of recruiting.

At the close of the 1936 training season therefore the Malay State Volunteer Regiment and the Malayan Volunteer Infantry lost their identities as separate regiments and were re-organised and amalgamated to form one Federal Force raised and organised on a State basis as under:

1st (Perak) Battalion, F.M.S.V.F.

2nd (Selangor) Battalion, F.M.S.V.F.

3rd (Negri Sembilan) Battalion, F.M.S.V.F.

4th (Pahang) Battalion, F.M.S.V.F.

F.M.S.V.F. Light Battery.

,, Signal Coy.

Sultan Idris Coy.

"X" Flight, F.M.S.V.F.

As briefly set above this operation may appear to have been a comparatively simple affair, and the changes largely a matter of paper work. In practice however this is far from being the case. The new scheme involved the recruiting as well as the formation of new units such as Engineer, Intelligence, and Despatch Rider sections, the organisation and training of which is new to the Volunteers, and in some cases it has been necessary to alter the roles of existing units.

The amalgamation of the European and Non-European Regiments meant an alteration in titles, badges and dress, and "Dress Committees" had to be formed to discuss and agree upon designs, etc., that would not only be practical but acceptable to all the different elements concerned. Special provision had to be made for the intermingling of the different ranks so that no friction should arise as a result of loss of seniority, or between the several different races. Such far reaching changes have not only a generally unsettling effect but also demand a good deal of sacrifice and compromise from all concerned. That the scheme has progressed so successfully, and with such little friction reflects the greatest credit upon the loyalty and sense of duty of all ranks.

The Federated Malay States Volunteer Force were represented at the coronation of His Majesty King George VI by four British Officers and one Asiatic Officer.

The State Troops of each of the four States were represented by an officer drawn from the establishment of the Battalion concerned and the fifth officer represented the Asiatic members of the Force.

MALAY ADMINISTRATIVE SERVICE.

In March, 1910, a scheme for the employment of Malays in the Public Service (Higher Subordinate Class) was introduced with the object of training boys of good family to fit them for high and responsible appointments in the Government service. The officers appointed under that scheme were styled Malay Assistants. Probationer Malay Assistants were selected from boys who had passed the 7th Standard at the Malay College, Kuala Kangsar. After selection they had to undergo a three-year course of study in the College and show proficiency in official correspondence, Treasury work and other prescribed subjects before being appointed as Malay Assistant, Grade III. On promotion to Grades II and I of the scheme Malay Assistants were eligible to serve as Settlement Officers and in other appointments of similar status. There was provision for a Special Class consisting of two Magisterial appointments, three appointments of Assistant District Officer, one of Malay Assistant and one of Assistant Conservator of Forests. The salary scale of the various grades, including the Special Class, was the same as that of the General Clerical Service in force at the time. The scheme also held out hope to officers in the Special Class of promotion to higher appointments in the Civil Service, thus envisaging the possibility of further development should the work and ability of officers on the scheme justify further advancement.

The outbreak of the Great War, making it necessary for Government to free as many of its European officers as possible for military duty, resulted in a considerable increase in the numbers of Malay Assistants appointed to higher and more responsible posts, and in 1917 it was decided to introduce a new scheme which opened to the Malay Officers a well-paid administrative career. The passing of the Cadets' Law Examination was introduced into this scheme as a condition for promotion to the Special Class.

The 1917 scheme was in turn superseded in 1921 by another scheme which provided that boys educated in English schools other than the Malay College, Kuala Kangsar, should be eligible to compete for 50 per cent. of the annual number of vacancies for probationerships. There were at the time of the introduction of this revised scheme in 1921 twelve Malay Officers who were performing the duties of Civil Service appointments or of additional appointments open to Cadets. The number of Malay Officers at end of 1921 was 50 and there were in addition 23 Probationers.

The Malay Administrative Service Scheme in its present form dates from 1930. Appointments as Probationers in the Malay Administrative Service are open to Malays who have passed the Cambridge School Certificate examination and are over 18 and under 20 years of age. In the case of candidates who have taken an honours degree at Oxford or Cambridge the age limit may be waived and they may be appointed on a salary higher than the initial salary prescribed under the scheme. Vacancies are filled by the Federal Secretary on the recommendation of a Selection Board, a minimum of 50 per cent. of the posts being reserved for boys from the Malay College, Kuala Kangsar. Successful candidates undergo a course of study in Law and General Orders at the Malay College, Kuala Kangsar, for a period of one year, and thereafter remain on probation for at least two years during which period they have to pass the examination in General Orders and Colonial Regulations set for Cadets of the Malayan Civil Service and also an oral examination on subjects connected with the actual work they have been doing. Thereupon they become Malay Officers, Class III, on a salary scale of $150-A10-$170 per mensem. After serving for three years in this Class and provided they have passed the examination in Law prescribed for Cadets of the Malayan Civil Service, Malay Officers are promoted to Class II on a salary scale of $200-A10-$300 per mensem. There are 22 appointments in Class II mainly consisting of Deputy Assistant District Officerships.

Malay Officers in Class II with not less than seven years' service become eligible for promotion to Class I. Promotion to Class I is not automatic or by seniority but depends on the occurrence of vacancies and is by selection according to merit and qualifications. There are 28 posts in this Class, the salary scale of which is $330-A15-$420 per mensem. Officers in Class I are called upon to function as Assistant District Officers, Second Magistrates and in other appointments of a similar status and responsibility, many of which were formerly in the cadre of the Malayan Civil Service.

The declared policy of Government is that Malay Officers of the Malay Administrative Service who by reason of their character, ability and industry have shown their fitness should be promoted to the Malayan Civil Service. Officers of Class I of the Malay Administrative Service who have served in that Class for at least three years are eligible for promotion to the Malayan Civil Service for service in the Federated Malay States only: such promotions being made by selection according to merit and depending upon vacancies in the authorised cadre. At the end of the year under review 20 Malay Officers had been promoted to the Malayan Civil Service.

General.

THE CORONATION OF HIS MAJESTY KING GEORGE VI.

The Coronation of Their Majesties King George VI and Queen Elizabeth which followed so soon after the demonstrations of affection for the Throne and the Royal Family displayed on the occasion of the Silver Jubilee of His late Majesty King George V, gave all communities in the four States of the Federation a further opportunity of publicly expressing their loyalty to the new King and Queen. As in the case of the Silver Jubilee, the celebrations were organised on a local basis and thanksgiving services in churches, mosques and temples formed a prominent feature of the ceremonies. These services were widely attended and Government officers who were entitled to do so appeared in uniform.

Special leave and pay concessions were granted to as many Government employees as could be spared to enable them to attend and partake in the rejoicings.

The Coronation of Their Majesties will long be remembered by the school children who everywhere played an important part in making the celebrations a success, and thoroughly enjoyed themselves in doing so. The sick and needy too were not forgotten.

Apart from the striking demonstrations or loyalty and devotion towards Their Majesties, the spirit of co-operation displayed by the many different communities in organising the celebrations, and the way in which they were carried out is a noteworthy instance of the racial harmony and neighbourliness which exists among the many races which form the population of these States.

All the four States of the Federation tendered to His Majesty the King a joint Loyal Address and Congratulatory Telegram. The Address was engrossed and illuminated by the Survey Department of the Federated Malay States and Straits Settlements. It was sent in a casket made of ivory which had mounted on it an inscribed gold plate.

HIS MAJESTY THE KING was graciously pleased to confer the following honours:

At the New Year—

Knight Grand Cross of the Most Distinguished Order of St. Michael and St. George	His Excellency Sir Thomas Shenton Whitelegge Thomas, K.C.M.G., O.B.E., Governor and Commander-in-Chief of the Straits Settlements, High Commissioner for the Malay States
Companion of the Most Distinguished Order of St. Michael and St. George	Theodore Samuel Adams, Esqr., M.C.S., late British Resident, Selangor
Member of the Most Excellent Order of the British Empire (Military Division)	Raja Suleiman bin Raja Mohamed Sapian, Company Sergeant-Major, 2nd (Selangor) Battalion, Federated Malay States Volunteer Force
Medal of the Most Excellent Order of the British Empire (Military Division)	Stanley Boudeville, Esqr., Company Quartermaster Sergeant, 2nd (Selangor) Battalion, Federated Malay States Volunteer Force

On His Majesty's Coronation—

Honorary Knight Commander of the Most Excellent Order of the British Empire (Civil Division)	Raja Abdul Aziz ibni al-Marhum Raja Muda Musa, C.M.G., Raja Muda of Perak
Commander of the Most Excellent Order of the British Empire (Civil Division)	Lieutenant-Colonel Cecil Rae, M.F.C., M.S.C., J.P.
Honorary Officer of the Most Excellent Order of the British Empire (Civil Division)	Towkay Leong Sin Nam, M.S.C., M.C.H., J.P.
Officer of the Most Excellent Order of the British Empire (Civil Division)	Dr. George Waugh Scott

Certificates of Honour were awarded to the following persons in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Haji Ahmad bin Haji Abdul Raof, Orang Kaya Besar Maharaja di Raja.

Mr. Lau Ek Ching, J.P.

Mr. Joseph Appadurai.

Mr. Chan Seng Long, J.P.

Mr. S. Kandiah.

His Highness the Sultan of Perak presented six silver bugles to the Malay Regiment on 20th October, 1937, in the presence of members of the Perak State Council, the Heads of Departments and a large gathering of the general public.

The fortieth Anniversary of the accession of His Highness the Sultan, Sir Ala'idin Suleiman Shah, G.C.M.G., K.C.V.O., to the throne of Selangor was celebrated at Klang on the 11th September, 1937.

His Highness the Yang-di-pertuan Besar of Negri Sembilan and His Highness the Sultan of Pahang visited England to attend the ceremonies in connection with the Coronation.

Prices for both rubber and tin rose rapidly during the early months of the year and though there was an almost equally marked fall in the price of both commodities during the last quarter of the year, yet taken on the whole 1937 was an exceedingly prosperous year so far as the Federated Malay States were concerned. It was at last found possible to make a start with the long deferred Reserve Fund and fifteen million dollars was set aside for the purpose. This fund, which perhaps would be more accurately described as a Revenue Equalisation Fund, is rendered necessary by the violent fluctuations which take place in the annual revenue. It was first proposed in 1929 but though agreed to at the time, it was not until last year that the balances at the disposal of the Government warranted the setting aside of any substantial amount. The financial position appeared so satisfactory in the middle year that it was considered desirable to remit or reduce a number of import duties. The only one of any individual financial importance was that on sugar, but it was estimated that taken together they amounted to a remission of about three millions in a full year.

An important change was introduced during the year by the creation of the office of Financial Secretary and its inclusion in the establishment of the Federal Secretariat. Mr. M. Rex, M.C.S., assumed the duties of the post, with effect from 14th August, 1937, inclusive and continued in office throughout the rest of the year. The post carries a seat on the Federal Council and ranks in Class IA of the Malayan Civil Service, salary $1,400 per mensem.

Mr. H. Fraser, M.C.S., acted in the post of Federal Secretary, Federated Malay States, from 10th April, 1937, to 16th December, 1937, during the absence on leave of the writer.

KUALA LUMPUR,
31st August, 1938.

C. D. AHEARNE,
Federal Secretary, F.M.S.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,083	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,832,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,825	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896. § A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801: that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

APPENDIX A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade.		Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
			Imports.	Exports.								
	$	$	$	$		$		$	$	$		
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,868	23,720	1,395,923	2,790,451	9,469,446	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	14,000,633	118,590	8,667,274	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,583,799	160,213	11,192,715	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,180	17,704,014	127,593	8,575,863	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,037,720	174,490	3,712,752	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584‡	84,660,975¶	201,393,405	349,012,595	67,042	15,420,646	261,352	4,313,743	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870‡	82,470,192¶	168,020,418	213,652,044	62,065	9,121,971	249,675	1,084,440	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659‡	62,163,328¶	106,201,211	125,177,183	51,250*	5,501,733	243,886	543,778	4,832,700	12,912,579	1,723,117§	1931
1932	43,817,151‡	53,740,139¶	71,133,301	87,851,281	27,091*	3,594,022	235,898	376,380	4,268,125	9,483,859	1,770,486	1932
1933	47,198,806‡	50,258,671¶	67,129,150	111,885,935	22,324*	4,886,083	248,356	577,406	3,989,363	9,036,776	1,597,770	1933
1934	58,926,323‡	47,211,228¶	84,731,059	202,725,341	36,385	8,886,234	256,516	2,160,157	5,141,756	11,284,147	1,631,728	1934
1935	62,364,264‡	51,119,943¶	87,102,149	186,770,827	40,748	9,760,616	194,478	2,247,497	5,593,334	11,871,097	1,777,421	1935
1936	68,090,902‡	52,702,228¶	96,796,795	246,945,491	64,719	13,410,254	182,873	2,817,180	5,804,247	13,086,733	1,847,951	1936
1937	80,864,589‡	71,143,470¶	131,101,350	357,247,152	75,394	19,487,585	247,386	4,763,184	5,073,314	16,812,650	1,961,397	1937

‖ Excluding bullion and specie.

§ *Vide* foot-note on page 151.

† The figures for previous years included items now omitted owing to reclassification of revenue.

‡ Exclusive of Railway receipts.

¶ Exclusive of Railway expenditure.

* The tonnage for the years 1931, 1932 and 1933 was based on 72% tin content of ore and not on the true assay value, viz., 75.5%.

APPENDIX B.

Dr. F.M.S. 3 PER CENT. STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1937. Cr.

	$ c.	$ c.		$ c.
To Redemption of 4½ per cent. S.S. Sterling Loan 1935-45—			By Loan Subscription— 3 per cent. 1960-70 issued in June, 1935	34,285,714 29
Total Loan raised	36,000,000 00			
Less Redemption from Revenue Account	1,714,285 71	34,285,714 29		
		34,285,714 29		34,285,714 29

APPENDIX C.

Dr. F.M.S. 4½ PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1937. Cr.

	$ c.	$ c.		$ c.
To Loan Expenses—			By Loan Subscription— 4½ per cent. issued at 98 in May, 1931	16,000,000 00
(*a*) Discount on Issue Price ...	320,000 00			
(*b*) Commission and Charges ...	40,000 00	360,000 00		
To Loan Works as per Statement VI...	...	12,926,490 15		
To Balance	...	2,713,509 85		
		16,000,000 00		16,000,000 00

APPENDIX D.

Dr. F.M.S. 3 PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31st DECEMBER, 1937. **Cr.**

	$	c.	$	c.		$	c.
To Loan Expenses—					By Loan Subscription—		
(*a*) Advertisement	600	20			3 per cent. 1956-66 issued in July, 1936	15,000,000	00
(*b*) Commission and Charges ...	37,500	00	38,100	20			
To Transfer to the Supplementary Sinking Funds for the Redemption of the Straits Settlements 6 per cent. Sterling Loan 1936-51	...		14,961,899	80			
			15,000,000	00		15,000,000	00

APPENDIX E.

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

	Cost. $ c.	Where obtainable.
Census Report, British Malaya, 1931	5 00 ...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Handbook to British Malaya ...	1 00 ...	Malayan Information Agency, 57, Charing Cross, London; Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
The Oil Palm in Malaya ...	2 00 ...	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
An Outline of Malayan Agriculture	3 00 ...	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 60 ...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Treaties and Engagements affecting the Malay States and Borneo	3 50 ...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Geology of Malayan Ore Deposits	8 00 ...	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Geology of Malaya	8 00 ...	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free ...	Malayan Information Agency, 57, Charing Cross, London.

APPENDIX E—(*cont.*)

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES—(*cont.*).

	Cost.	Where obtainable.
	$ c.	
Fisheries of British Malaya ...	5 00	... Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Commercial Timber Trees of the Malay Peninsula	5 00	... Adviser on Forestry, Malay States, Kuala Lumpur.
Report on the Wild Life Commission (Three volumes) ...	12 00	... Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Malayan Year Book	1 50	... Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Rubber Statistics Handbook ...	1 50	... Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Schedule of Import, Export and Excise Duties, Malaya ...	50	... Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Mui Tsai in Hong Kong and Malaya, Report of Commission	2 50	... Messrs. Kelly and Walsh, Ltd., Singapore.
Manual of Taxes, Licences, Duties, Fees, etc.	1 00	... Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Dictionary of the Economic Products of the Malay Peninsula (two volumes)	13 00	... Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Papers on Malay Subjects ...	1 00	... Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.

Federated Malay States Government Press.

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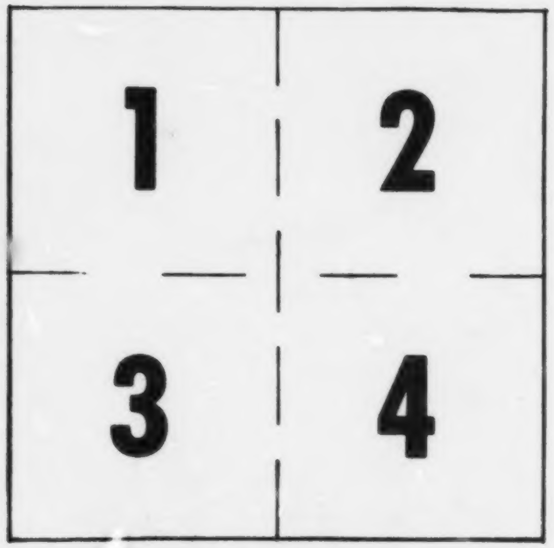

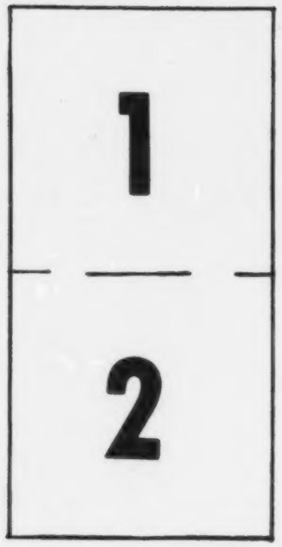

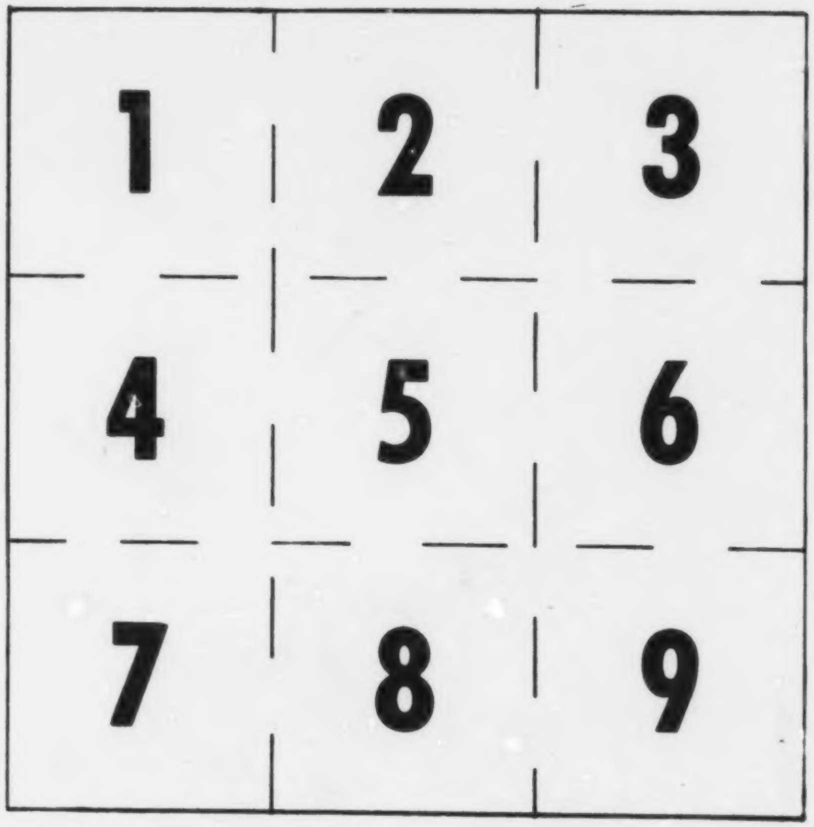

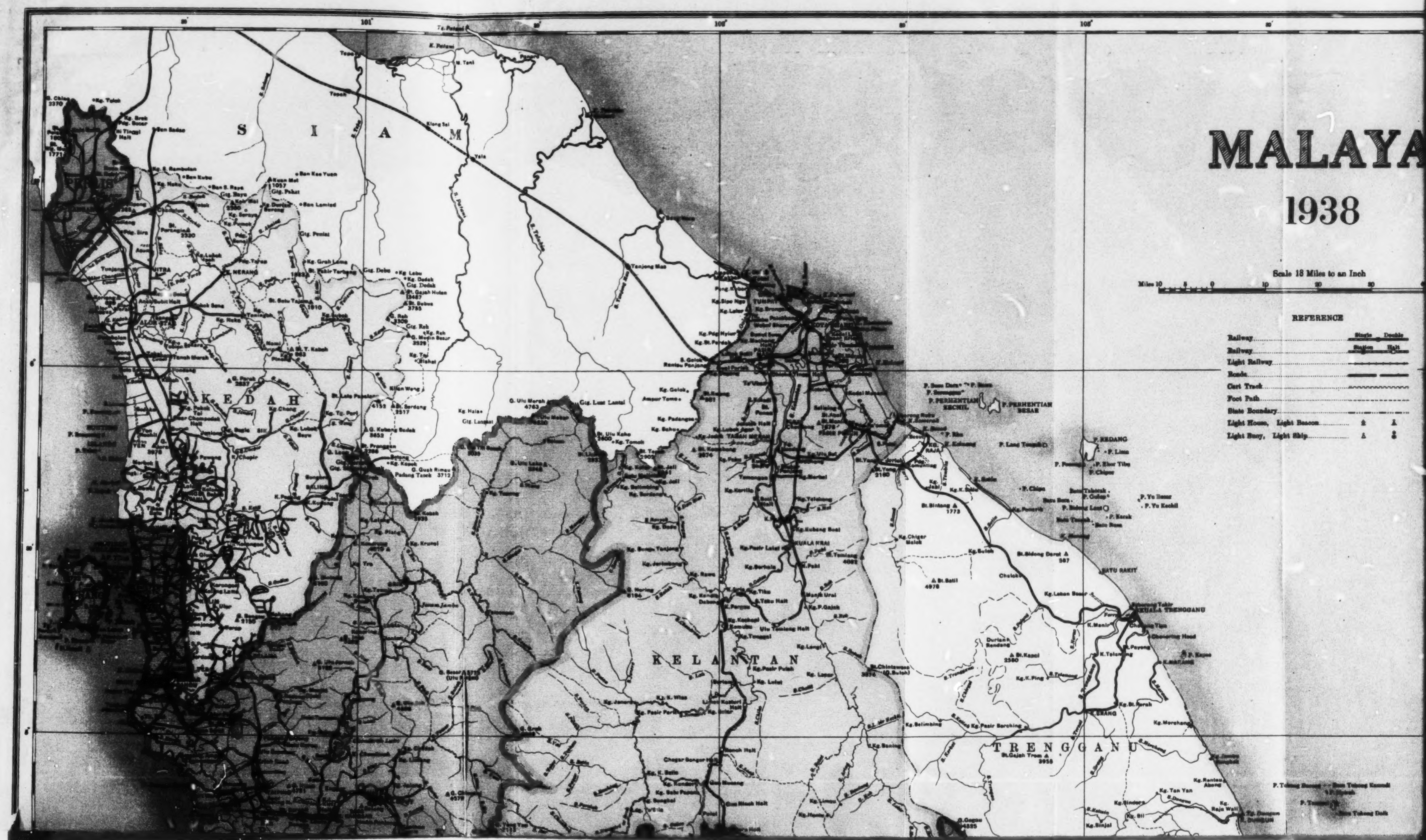
MALAYA
1938
Scale 18 Miles to an Inch
Miles 10 5 0 10 20 30
REFERENCE
Railway Single Double
Railway Station Halt
Light Railway
Roads
Cart Track
Foot Path
State Boundary
Light House, Light Beacon
Light Buoy, Light Ship
101°
102°
103°
6°
5°
S I A M
KEDAH
PERLIS
PENANG
KELANTAN
TRENGGANU
KUALA TRENGGANU
KUALA KRAI
Tg. Patani
Yala
Tanjong Mas
P. PERHENTIAN KECHIL
P. PERHENTIAN BESAR
P. REDANG
BATU RAKIT
Kg. Tan Yan
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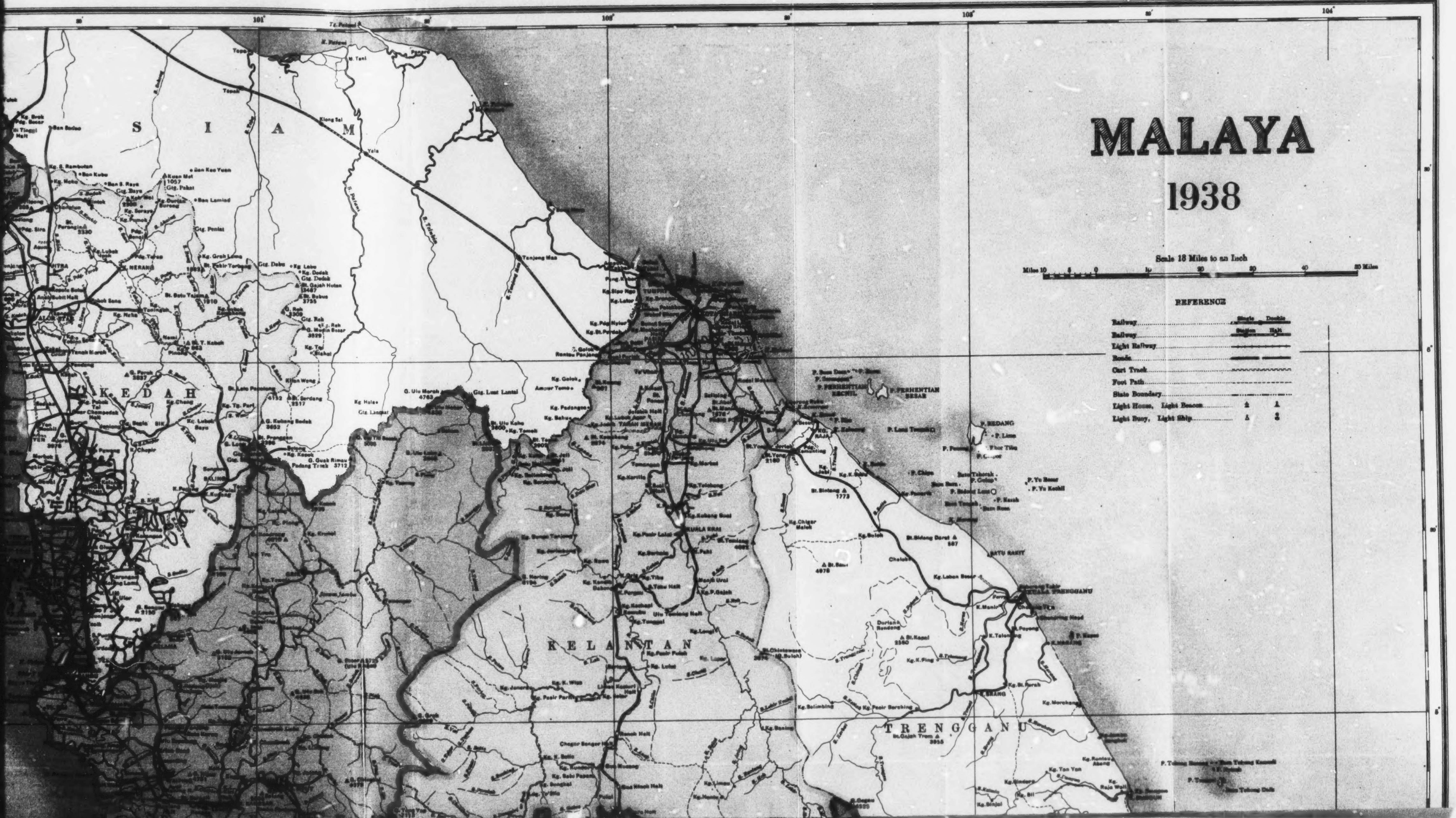
DUNGUN
Ulu Tamiang Halt
St. Bintang 1773
St. Bidong Darat 387
St. Gajah Trom 3956


MALAYA
1938
Scale 18 Miles to an Inch
Miles 10 5 0 10 20 30 40 50 Miles
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Railway — Station Halt
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Cart Track
Foot Path
State Boundary
Light House, Light Beacon
Light Buoy, Light Ship
101°
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S I A M
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K E L A N T A N
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Yala
Klong Sai
Tanjong Mas
G. Ulu Merah 4763
P. PERHENTIAN BESAR
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P. REDANG
BATU RAKIT
KUALA TRENGGANU
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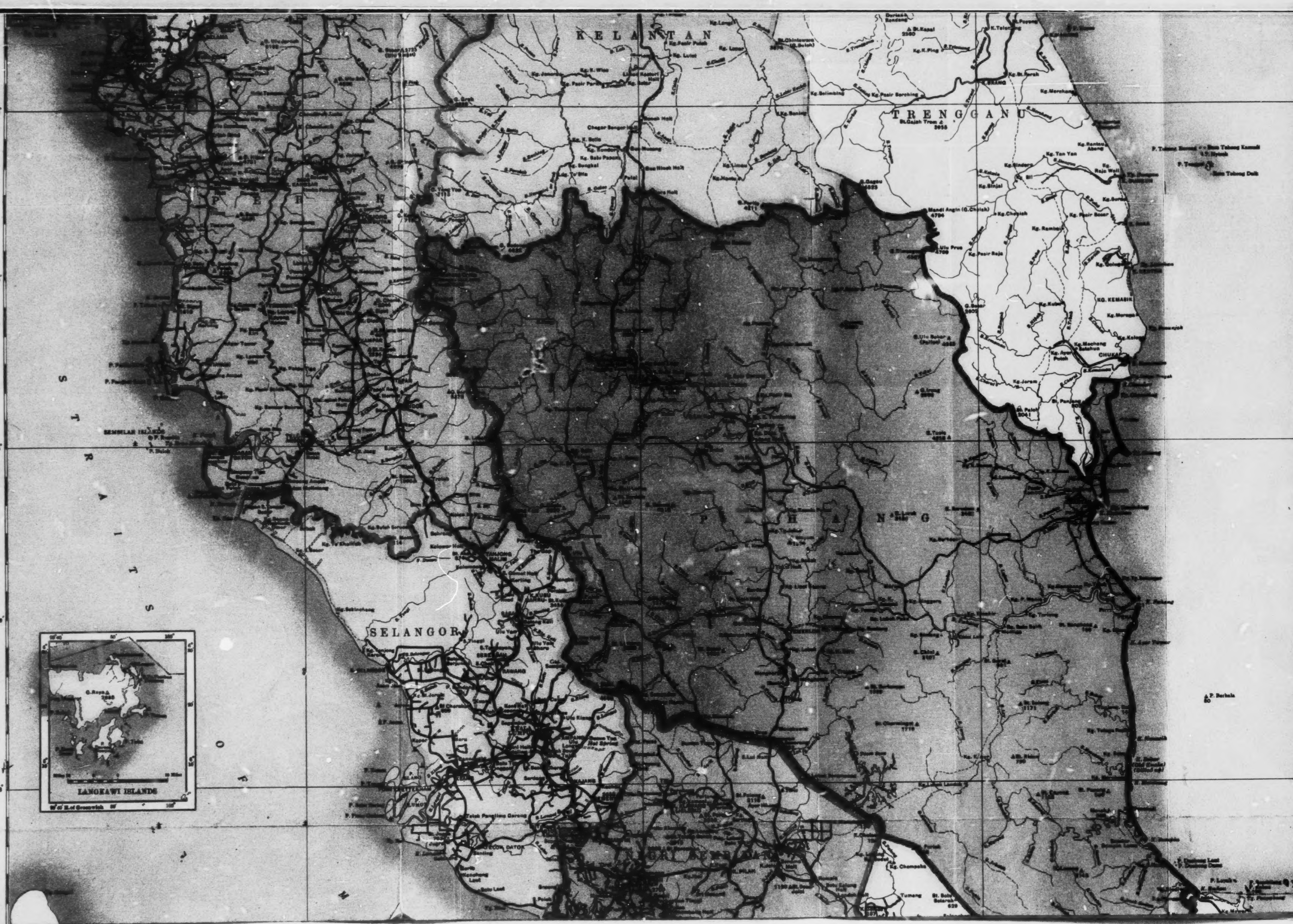
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Mandi Angin (G. Chokah) 4794
Ulu Prua 4709
KG. KEMASIK
CHUKAI
K. Pahang
Kg. Sabinchang
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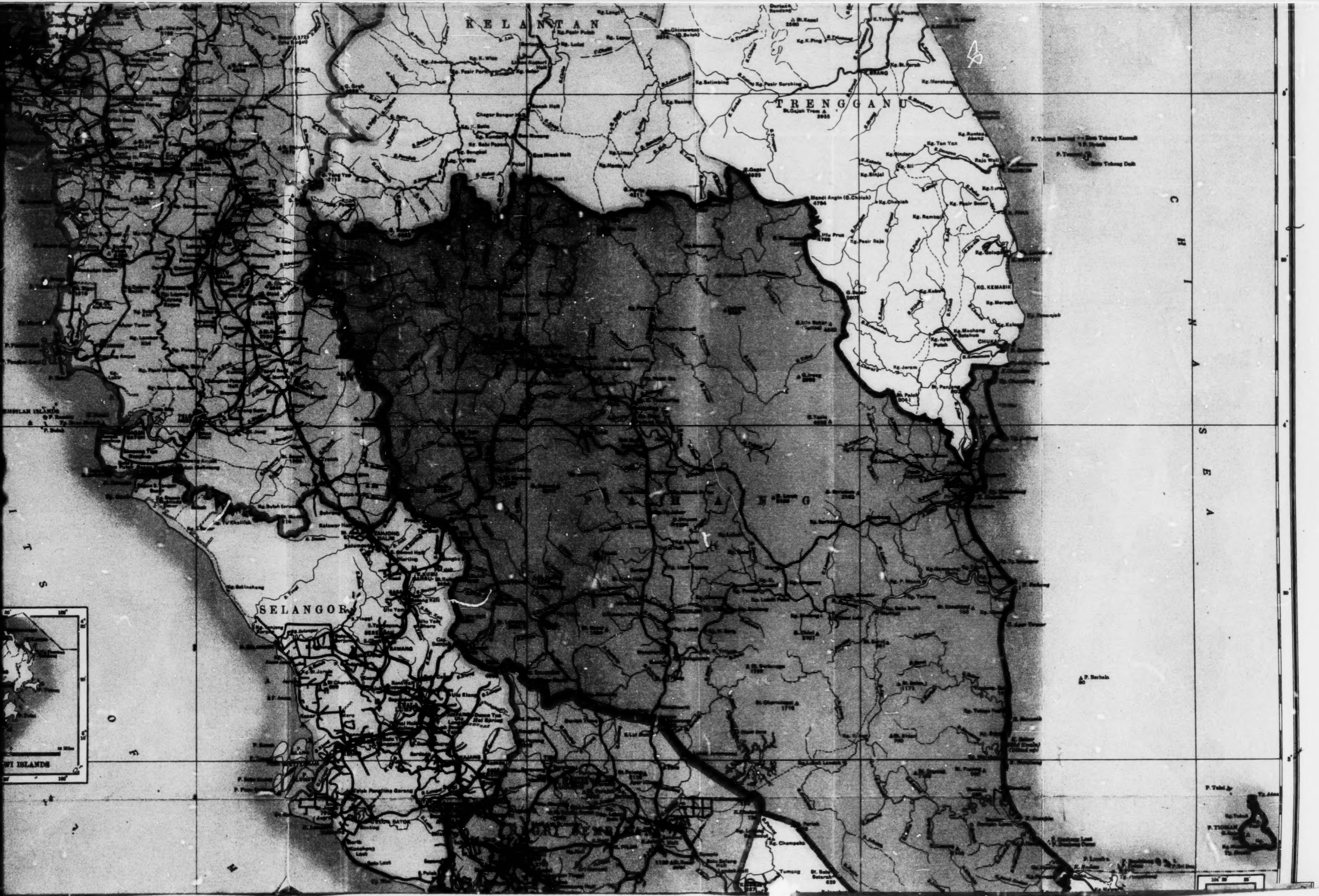
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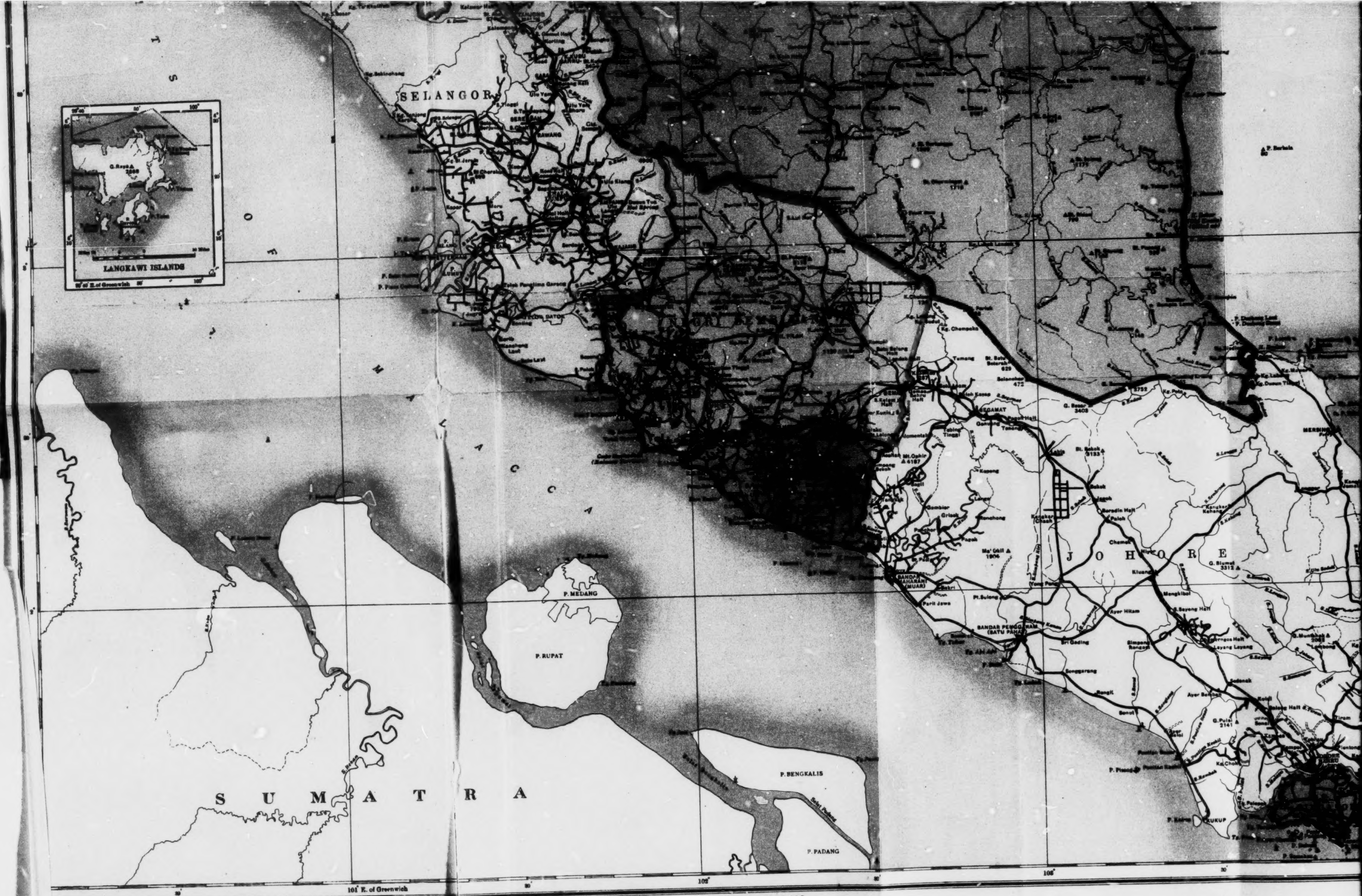
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SEGAMAT
Mt. Ophir 4187
J O H O R E
Kluang
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Ayer Hitam
Paloh
Labis
Bekok
Chemak
G. Besar 3403
Bt. Bakok 3133
G. Blumut 3312
Ma' Okil 1906
BANDAR MAHARANI (MUAR)
Parit Jawa
BANDAR PENGGARAM (BATU PAHAT)
Sri Gading
Senggarang
Benut
Ayer Baloi
G. Pulai 2141
Pontian Kechil
KUKUP
MERSING
P. MEDANG
P. RUPAT
P. BENGKALIS
P. PADANG
S U M A T R A
101° E. of Greenwich
102°
103°
30'

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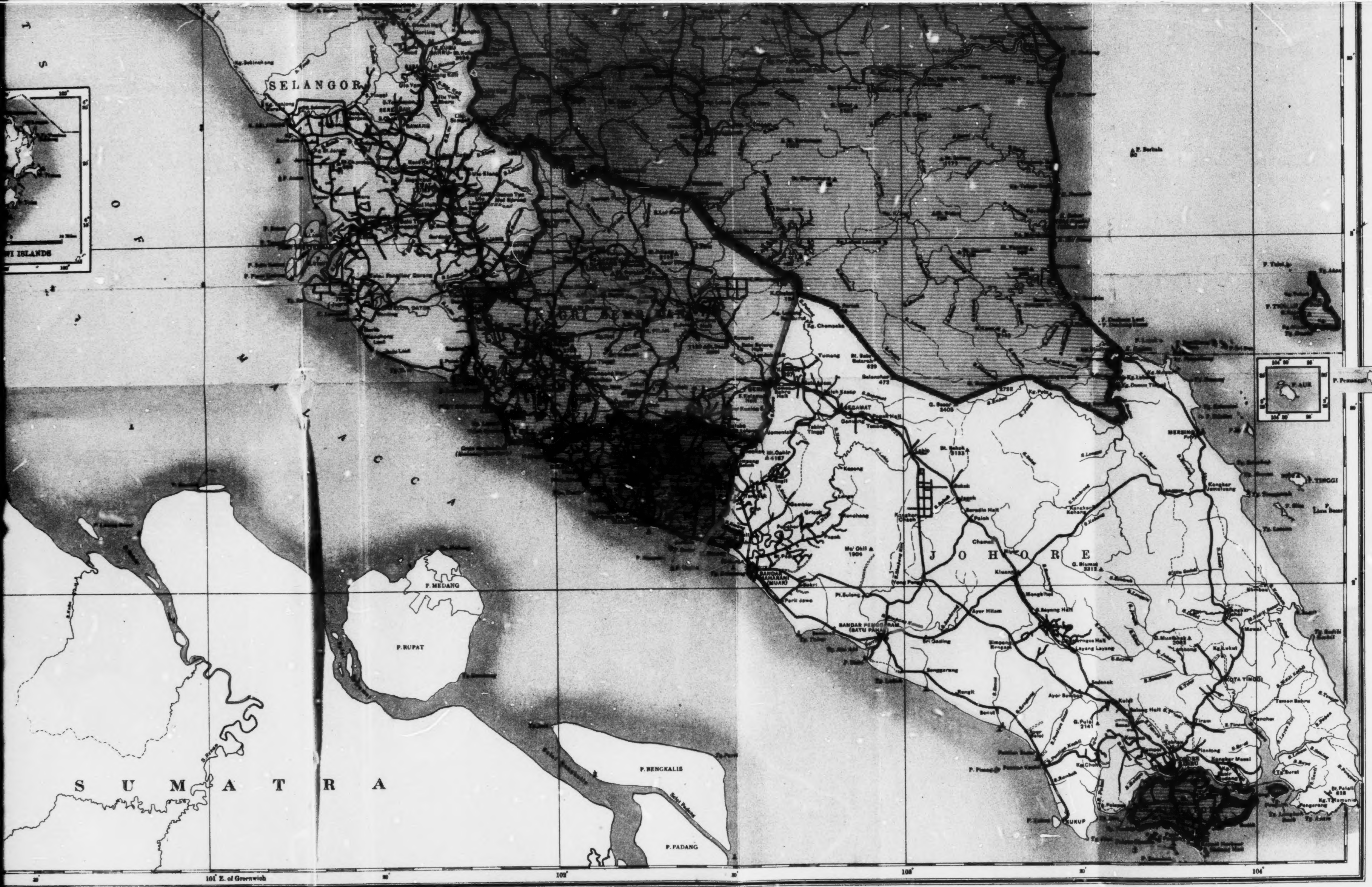
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GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

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F.M.S. 4½ PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1938.

F.M.S. 3 PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1938.

SUMMARY OF CUSTOMS TARIFF.

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

GLOSSARY.

Amang = a black mineral substance found in company with tin-ore and consisting mainly of ilmenite
Atap = thatch usually made from the leaves of the nipah palm
Batek = the process of painting on fabrics, using wax to cover portions which are to remain immune from dyeing
Blachan = shrimp paste
Dulang = round wooden tray used for "washing" tin or gold
Gantang = a measure of capacity approximately equal to a gallon
Getah = rubber
Gula = sugar
Ikan = fish
Jelutong = the produce of a large indigenous tree used principally for manufacture of chewing gum (*dyera costulata*)
Kachang = a generic name for beans
Kampong = village
Kathi = Registrar of Marriage and Divorce
Kati = $1\frac{1}{3}$ lbs.
Keledek = sweet potato
Kongsi = communal house for Chinese labourers
Mukim = sub-division of a district
Nipah = a trunkless palm growing in swamp ground
Padi = rice in the husk
Parit = (in this context) a canal cut by the Irrigation Department for drainage purposes
Peluru Halilinter = thunderbolt
Penghulu = a headman
Picul = $133\frac{1}{3}$ lbs.
Ra'ayat = peasant
Rembia = sago-palm
Sakai = aboriginal tribes of the Malay Peninsula
Samsu = liquor distilled from fermented rice
Sawah = rice-fields
Sepat Siam = a kind of small fish which can be stocked in rice-fields
Tahil = $1\frac{1}{3}$ oz.
Tali ayer = a channel or canal cut for conveying water for drainage purposes

FEDERATED MALAY STATES.

REPORT OF THE FEDERAL SECRETARY, FEDERATED MALAY STATES, FOR THE YEAR 1938.

CHAPTER I.

Geography, including Climate and History.

The Federated Malay States comprise four States: Perak, Selangor, Negri Sembilan and Pahang, the federation of which was effected by treaty in 1895.

PERAK.

Perak is the northernmost of the three States on the West Coast of the Peninsula. It comprises 7,980 square miles. On the North it borders with Province Wellesley, Kedah and Siam; on the East it is separated from Kelantan and Pahang by the main range of granite mountains that forms the backbone of the Peninsula. The Perak river (170 miles long) is the principal river of the State. The capital of the State is Taiping.

Perak is ruled by a dynasty that claims descent from the last Malay Sultan of Malacca. From 1650 onwards, the Dutch endeavoured to get a monopoly of the tin exported from Perak, establishing near the mouth of the Perak river several factories, which the Malays, from time to time, cut off and destroyed. In 1765 the Sultan made a treaty with the Dutch.

British influence began early in the XIXth century. A treaty with Penang in 1818 secured to British subjects the right to free trade in Perak. In 1826 the Sultan ceded to the British the Dindings and the Island of Pangkor as posts for the suppression of piracy, and agreed to rely solely on the protection of Great Britain. From 1872 to 1874 there was almost continuous fighting of more or less severity between rival factions of Chinese in the Larut district where valuable tin deposits had been found. Having regard to the anarchy which prevailed, Sir Andrew Clarke, in 1874, induced the Perak chiefs to sign the Pangkor Treaty, and to accept thereby a Resident whose advice should be "asked and acted upon on all questions other than those touching Malay religion and custom".

By an Act of Parliament which received the Royal Assent on the 16th November, 1934, the territory of the Dindings was restored to Perak and has formed part of the State since the middle of February, 1935. His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., died on the 14th October, 1938, and is succeeded by His Highness Paduka Sri Sultan Abdul Aziz Al' Muktassim Bil'lah Shah, K.C.M.G., K.B.E.

SELANGOR.

Selangor (3,160 square miles), also on the West Coast is separated from Pahang on the East by the main mountain range of the Peninsula and from Negri Sembilan by the Sepang river. Port Swettenham, the principal harbour of the Federated Malay States, is situated on the estuary of the Klang river in this State. Kuala Lumpur, the Federal capital, and also the capital of the State, is situated some thirty miles further up the Klang river.

During the period of Portuguese ascendency, little is known of the Selangor coast. The Dutch opened factories for the purchase of tin at Kuala Selangor and at Kuala Linggi. In 1718 A.D., Daeng Chelak, a Bugis chief, who had married a Johore princess, settled at Kuala Selangor, and about 1780 their descendant was recognised as Sultan Salehu'd-din by the Ruler of Perak. The throne has remained in the same family ever since.

In 1818, the Sultan of Selangor made a commercial treaty with the East India Company at Penang. In 1874, anarchy prevailed amongst the Malay chiefs of Selangor, and pirates ravaged the coastal trade. The Sultan's difficulties were such that he was glad to accept a British Resident, and to come under the protection of Great Britain. His Highness Sultan Ala'idin Sulaiman Shah, G.C.M.G., K.C.V.O., died on the 31st March, 1938, and is succeeded by his son His Highness Sultan Hisamud-Din Alam Shah, K.C.M.G.

NEGRI SEMBILAN.

Negri Sembilan, South of Selangor, comprises 2,580 square miles. On the South it borders on Johore and on the East on Pahang. In the southern part of the State the great mountain range has disappeared and the water-parting between the West and the East Coasts is merely hilly and in places nearly flat ground. Seremban is the capital.

This federation of "Nine States" consists of the four major States of Sungei Ujong, Jelebu, Johol and Rembau, and the five minor States of Ulu Muar, Jempul, Terachi, Gunong Pasir and Inas. In the XVth century, it was ruled by Chiefs of the old kingdom of Malacca. Nearly all the Malay inhabitants of the "Nine States" are descended from immigrants from Menangkabau in Sumatra, and have an interesting matrilineal sociological system. After the wresting of Malacca from the Portuguese by the Dutch and the Johore Malays in 1641 A.D., Johore took a leading part in Negri Sembilan politics until 1773 A.D., when the Undang or Ruling Chiefs of the four major States brought from Sumatra a Yam Tuan named Raja Melewar, ancestor of the present Yang-di-pertuan Besar.

In 1874, the Dato' Klana, Chief of Sungei Ujong, the most important of the "Nine States" invited and obtained the assistance of the British Government to maintain his rule, and the appointment of a British Resident. In 1883, Jelebu applied for a British officer; and Rembau agreed to refer all its disputes to the British Government and in 1887 accepted a British adviser. In 1889, the Yam Tuan of Sri Menanti and the Rulers of Tampin and Rembau asked for a Resident, and agreed to a confederation known as "The Old Negri Sembilan". In 1895, the Resident of this confederation took charge of Sungei Ujong and of Jelebu, and the modern Negri Sembilan was constituted. Finally, in 1898, the Yam Tuan of Sri Menanti was elected titular Ruler of the whole State. The present Ruler is His Highness Tuanku Abdulrahman, K.C.M.G., ibni Al-Marhum Tuanku Muhammad, Yang-di-pertuan Besar, Negri Sembilan.

PAHANG.

Pahang, the only State of the Federation on the East Coast, comprises 13,820 square miles. It is bordered on the South by Johore, on the West by Negri Sembilan, Selangor and Perak, and on the North by Trengganu and Kelantan. The highest mountain in the Peninsula (Tahan, 7,184 feet) is in this State.

The dynasty that ruled Pahang also claims descent from the Rulers of the royal house of Malacca, and before that house died out in 1699 its Pahang branch provided several Rulers for the senior throne of Johore which directly represented the Malacca dynasty. Later, Pahang fell under the suzerainty of the new Sultans of Johore, who, when they removed to Lingga, left a Dato' Bendahara in charge of Pahang.

In 1887, Sir Fredrick Weld negotiated a treaty with the Bendahara of Pahang, promising British help in the event of external attack, and arranging for a British agent to be stationed at his capital. At the same time, the title of Sultan was substituted for that of Dato' Bendahara. In 1888, the Sultan applied for and obtained British protection, and the appointment of a Resident. The present Ruler is His Highness Al-Sultan Abu Bakar Ri'ayatu'd-din Al-Mu'ad-dzam Shah, K.C.M.G., ibni Al-Marhum Al-Sultan Abdullah.

CLIMATE.

The characteristic features of the climate of Malaya are uniform temperature, high humidity and copious rainfall, and arise mainly from the maritime exposure of the Peninsula. By uniform temperature is meant the lack of serious temperature variation throughout the year; the daily range of temperature is generally between 10° and 15°F. at coastal stations and between 15° and 20°F. at inland stations. The variation of temperature throughout the year is very small and excessive temperatures which are found in continental tropical areas are never experienced. In this connection it may be noted that an air temperature of 100°F. has very rarely been recorded in Malaya under standard conditions.

The variation of rainfall is the most important feature in the seasonal division of the year, but as this is not the same everywhere and as it is due to the more uniform periodic changes in the wind, the wind changes are usually spoken of when seasons are mentioned. There are four seasons which we can distinguish, namely, that of the South-West Monsoon, that of the North-East Monsoon, and two shorter seasons separating the end of each of these from the beginning of the other.

The winds of the South-West Monsoon, as experienced in Malaya, are very light and at the ground are almost completely lost in stronger local circulations such as the land and sea breezes which are a regular feature.

The North-East Monsoon occurs at the season which corresponds with the winter of the northern latitudes. This wind is actually the normal North-East Trade Wind which moves south at this time of the year and is strengthened by the low temperatures on the continent of Asia. As a consequence it is a much stronger and steadier wind than the South-West Monsoon so far as Malaya is concerned.

The times of commencement of the monsoons vary to some extent. The South-West Monsoon is usually established in the latter part of May or early in June and ends in September. The North-East Monsoon usually commences in late October or November and ends in March.

The seasonal variation of rainfall in Malaya is of three types. Along the East Coast, and for some miles inland, the maximum rainfall occurs with the North-East Monsoon, the remainder of the year being comparatively dry. There is a steady increase of rainfall month by month from May or June to December, followed by a steady decrease on to the middle of the year. Over the inland districts and along the greater part of the West Coast the maximum rainfall usually occurs in October and November. A second rainy season, though not so pronounced, occurs in March and April, the middle periods of the monsoons being comparatively dry.

The yearly rainfall is high over the whole of the Peninsula, the driest station of those at which records have been kept being Jelebu, with an average of 65 inches. The highest rainfall recorded occurs in the Larut Hills near Taiping where the average at "The Cottage" (4,513 ft.) is 232 inches. Taiping itself, at the foot of these hills, has the highest rainfall of the low-level stations with an average of 166 inches. The high rainfall of this area is exceptional and at other hill stations at approximately the same height, but in the main range of mountains, the average rainfall is lower; Fraser's Hill for example averages 109 inches and Cameron Highlands 106 inches.

The nights are reasonably cool everywhere and although the days are frequently hot, and, on account of the high humidity somewhat oppressive, it very rarely happens that refreshing sleep is not obtainable at night. The effect of the heat and humidity is, however, cumulative, and after a few years Europeans require a change to a bracing climate if their health is to be maintained.

At the hill stations conditions are very different. Uniformity of temperature is still found but the temperature itself is, naturally, much lower. The highest temperature recorded at Fraser's Hill (4,200 feet) is 81°F. and at Tanah Rata, Cameron Highlands (4,750 feet), 79°F. The coolest night temperature recorded at Fraser's Hill is 53°F. and at Tanah Rata 36°F. or only 4°F. above freezing.

CHAPTER II.

Government.

CONSTITUTION OF THE STATES.

The supreme authority in each State is vested in the Sultan or the Ruler in State Council. His Highness the Sultan or the Ruler presides over the State Council. The British Resident is a member, and in Perak and Selangor, the Secretary to Resident also is a member.

The State Council of Negri Sembilan comprises two Chambers, the Council of the Yang-di-pertuan Besar and Undang, and the Lower Chamber or State Council. Legislation is introduced into the State Council and if passed is submitted to His Highness and the Undang for amendment or confirmation, and assent is finally given by His Highness and the Undang. Matters which concern Muhammadan religion and Malay customs are dealt with by the Upper Chamber which legislates on such matters by means of Orders in Council and also exercises the statutory executive powers vested in the State Council.

THE FEDERATION.

In 1895, a Treaty was signed by the Rulers of the four States by which they agreed to constitute their countries into a Federation which was to be known as the Federated Malay States and to be administered under the advice of the British Government, while all existing treaties and arrangements were to stand. The State Councils agreed to the appointment of an officer styled Resident-General (a title later altered to Chief Secretary to Government) as the agent and representative of the British Government under the Governor of the Straits Settlements who became ex officio the High Commissioner for the Malay States. They agreed to follow his advice in all matters of administration other than those touching the Muhammadan religion, provided that the relations between the Malay Rulers and the British Residents remained unaffected.

In 1909, a Federal Council was created in order to give effect to a desire for the joint arrangement of all matters of common interest to the Federation or affecting more than one State.

In 1927 the Federal Council was reconstituted and the Rulers withdrew from active participation in the deliberations of the Council; and the Council was enlarged by the addition of a number of official and unofficial members.

In 1936, as a further step towards decentralisation, the post of Chief Secretary to Government was abolished and the post of Federal Secretary was substituted, ranking as a Class IA appointment in the Malayan Civil Service. The office carries a seat on the Federal Council and in precedence comes next after the Residents. The duties of the post in purely Federal matters comprise all those which ordinarily appertain to an office of Chief or Colonial Secretary. In matters appertaining purely to the States he is the channel of communication between the States and the High Commissioner. This change was effected on the 24th February, 1936.

The Federal Council consisted in 1938 of the High Commissioner as President; the four British Residents; the Federal Secretary; the Legal Adviser; the Financial Secretary; the Adviser on Medical Services; the Controller of Labour; the General Manager for Railways; the Adviser on Education; the Comptroller of Customs; the Secretary for Chinese Affairs; the Adviser on Agriculture; one Official Member nominated by the High Commissioner and twelve Unofficial Members who are nominated by the High Commissioner with the approval of His Majesty the King. The Federal Council passes all laws affecting more than one State, but such legislation is enacted by the Rulers of the Federated Malay States by and with the advice and consent of the Federal Council. Certain laws relating to departments, which under the decentralisation policy have been transferred to State control, though affecting more than one State are however passed by the State Councils. The Federal Council retains the supreme financial control within the Federation, but each State Council now appropriates in a State Supply Enactment the expenditure in respect of purely State services up to a definite sum allocated to the State beforehand by resolution of the Federal Council.

Local Government.

For the purposes of local Government the Federated Malay States are divided into 25 districts in each of which there is a Sanitary Board, a Licensing Board, and in a few districts a Drainage Board. Each Board is composed of officials and non-officials, the former being members ex officio, while the latter are influential residents of the district nominated by the Resident of the State in which the district is situated. The Sanitary Boards are the sanitary authority in the towns and larger villages. They are responsible also for street lighting, rating, town planning and municipal matters generally. The Licensing Boards control the licensing of the sale of intoxicating liquors. The Drainage Boards are appointed for certain flat and low-lying districts on the West Coast, and are charged with the administration of drainage works in their districts.

CHAPTER III.

Population.

The population of the Federated Malay States on 30th June, 1938, was estimated to be 2,089,835 which is an increase of 128,438 on the previous year. The estimate is based on the census taken in 1931 and brought up-to-date by computing the differences between the births and deaths and the immigration and emigration for the intervening years.

The increase in the period under consideration was composed of 36,668 on account of the births over deaths and the remainder, 91,770, from immigration over emigration. The last mentioned figure is an increase on the previous year when the difference was 79,602.

The estimated population by States is indicated in the table below:

ESTIMATED POPULATION—MID-YEAR 1938.

State.	Malays.	Chinese.	Indians.	Non-Asiatics.	Others.	Total.
Perak	315,473	416,029	196,723	3,496	6,700	938,421
Selangor	142,501	311,242	192,788	4,193	10,284	661,008
Negri Sembilan ..	99,907	116,811	59,829	1,221	3,321	281,089
Pahang	122,874	67,114	17,362	538	1,429	209,317
Total ...	680,755	911,196	466,702	9,448	21,734	2,089.835

The sex ratio for the Federated Malay States as a whole was 139 males to 100 females. The influx of female immigrants from China has reduced the Chinese ratio to 145 males to 100 females, compared with 153 to 100 females in the previous year.

BIRTHS.

There were 82,946 births registered during the year, an increase of 8,750 or 11.8 per cent. over 1937, resulting in a birth-rate of 39.7 per 1,000 of total population compared with 37.8 in 1937. The birth-rates for Malays and Chinese have increased in every State, whilst that for Indians, except in Pahang, has decreased.

The birth-rate for all races has, on the whole, shown a steady increase over the past decade, the 1938 figure being the highest yet recorded.

The sex ratio of births of the three main races were: Malays 105 males to 100 females, Chinese 113:100 and Indians 102:100.

BIRTH-RATE IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1929-1938 (PER MILLE).

Year.	Malays.	Chinese.	Indians.	All races.
1929	33.6	37.6	25.5	32.4
1930	39.5	40.9	27.9	36.5
1931	37.3	31.3	32.3	33.3
1932	36.6	31.9	35.0	34.0
1933	39.3	33.1	34.6	35.5
1934	37.8	35.1	33.2	45.4
1935	37.5	37.4	32.1	35.9
1936	43.4	38.5	33.3	38.7
1937	40.2	40.0	31.8	37.8
1938	43.7	42.3	30.6	39.7

SUMMARY OF BIRTH-RATE IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1938.

State.	No. of births.	Malays.	Chinese.	Indians.	Others.	All races.
Perak	37,492	46.1	40.9	29.7	12.2	40.0
Selangor	25,656	42.9	43.5	30.4	9.6	38.8
Negri Sembilan ...	10,923	42.8	39.6	32.5	17.2	38.9
Pahang	8,875	39.2	50.9	36.6	6.1	42.4
F.M.S. ...	82,946	43.7	42.3	30.6	11.3	39.7

DEATHS.

The number of deaths recorded was 40,007, an increase of 976 or 2.5 per cent. over last year, but the death-rate was 19.1 per 1,000, the lowest recorded since 1932; which is very satisfactory in view of the increase in the incidence of malaria experienced in the latter part of 1937 and early in 1938. The greatest decrease was amongst the Indians, the rate falling from 20.4 in 1937 to 17.7, most marked in Perak. In Pahang the rates for Chinese and Indians showed an increase over the previous year, counter-balanced to some extent by a decrease in the Malay rate.

DEATH-RATES IN THE FEDERATED MALAY STATES ACCORDING TO RACES FOR THE PERIOD 1929-1938 (PER MILLE).

Year.	Malays.	Chinese.	Indians.	All races.
1929	21.8	29.6	23.4	24.6
1930	20.4	30.4	21.8	24.1
1931	18.8	18.9	20.5	19.1
1932	19.1	18.3	18.9	18.5
1933	22.0	19.3	19.7	20.2
1934	23.7	20.9	19.7	21.4
1935	21.0	19.8	19.5	19.9
1936	21.5	18.5	18.0	19.2
1937	21.1	19.2	20.4	19.9
1938	21.2	18.8	17.7	19.1

SUMMARY OF DEATH-RATES IN THE FEDERATED MALAY STATES PER MILLE ACCORDING TO STATES AND RACES FOR 1938 AND 1937.

State.	Malays.		Chinese.		Indians.		All races.	
	1938.	1937.	1938.	1937.	1938.	1937.	1938.	1937.
Perak	21.2	21.1	17.0	18.5	16.2	20.3	18.1	19.7
Selangor	20.7	19.5	20.0	19.9	16.3	18.3	18.7	18.9
Negri Sembilan	21.4	21.6	18.4	17.7	23.2	25.2	20.3	20.6
Pahang	21.5	22.5	25.6	23.0	31.5	27.5	23.5	22.9
F.M.S.	21.2	21.1	18.8	19.2	17.7	20.4	19.1	19.9

It is gratifying however to be able to record a continued decrease in the maternal death-rate to 8.5 per thousand births for the whole of the Federated Malay States compared with 9.0 per thousand births in the previous year.

SUMMARY OF DEATHS FROM ALL CAUSES AT THE DIFFERENT AGES IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1938.

State.	AGE GROUPS.								Total.
	Under 1 year.	1-4 years.	5-9 years.	10-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	
Perak	4,938	2,331	705	658	1,352	1,558	1,522	3,939	17,003
Selangor	4,010	1,795	467	412	1,013	1,155	999	2,528	12,379
Negri Sembilan	1,805	774	259	240	510	573	471	1,082	5,714
Pahang	1,404	801	240	173	385	500	459	949	4,911
Total	12,157	5,701	1,671	1,483	3,260	3,786	3,451	8,498	40,007

INFANT MORTALITY.

The infant mortality rate remains the same as in the previous year, 147 per 1,000 births. The lowest rate, as in 1936 and 1937, is for Chinese in Perak. The rate for Indians in all the States is lower than in the previous year, 150 per 1,000 compared with 169 in 1937.

SUMMARY OF INFANT MORTALITY RATES IN THE FEDERATED MALAY STATES ACCORDING TO STATES AND RACES FOR THE YEAR 1938, PER THOUSAND BIRTHS.

State.	All nationalities.		Malays.	Chinese.	Indians.
	Infant deaths.	Infant mortality rates.			
Perak	4,938	132	146	116	143
Selangor	4,010	156	169	156	145
Negri Sembilan	1,805	165	149	174	183
Pahang	1,404	158	155	162	167
F.M.S.	12,157	147	153	141	150

CHAPTER IV.

Health.

The state of the public health in 1938 was satisfactory as evidenced by the increase in the birth-rate and decrease in the death-rate while the latter can be regarded as most satisfactory in view of the increase in malaria in the latter part of 1937 and early 1938 as, although the number of deaths increased by 976 to 40,007, the rate fell to 197 per mille which is the lowest figure since 1932.

The hospital admissions again showed an increase which has been progressive since 1934 as shown by the table:

1934	75,916
1935	92,276
1936	98,551
1937	115,898
1938	136,705

The infantile mortality rate, which is a sensitive indicator of the state of public health, remained at the same figure as last year, 147 per mille births. This is higher than in 1935 and 1936 when the figures were 142 and 144 respectively but compares favourably with the rate of 163 per mille births in 1934. As remarked above the two factors taken in conjunction indicate that there was some improvement over the previous year.

SUMMARY OF PRINCIPAL CAUSES OF DEATHS IN THE FEDERATED MALAY STATES ACCORDING TO STATES FOR THE YEAR 1938.

State.	CAUSES OF DEATHS.											
	Malaria fever definitely diagnosed.	Enteric fever.	Dysentery.	Small-pox.	Diphtheria.	Cholera.	Plague.	Cerebro-spinal fever.	Tetanus.	Tropical typhus.	Influenza.	Probable malaria and fever unspecified.	Tuberculosis of respiratory system.
Perak ...	409	48	158	...	43	...	...	1	95	1	26	6,329	596
Selangor ...	307	17	181	...	36	...	...	2	157	14	39	3,132	444
N. Sembilan ...	316	11	73	...	11	...	...	...	18	1	6	1,736	208
Pahang ...	241	11	56	...	5	...	...	2	12	6	7	1,947	159
Total ...	1,273	87	468	...	95	...	...	5	282	22	78	13,144	1,407

State.	CAUSES OF DEATHS.											
	Other forms of tuberculosis.	Syphilis.	Ankylostomiasis.	Cancer.	Beri-beri.	Disease of the heart.	Other diseases of circulatory system.	Bronchitis.	Pneumonia (all forms).	Other diseases of respiratory system.	Diarrhoea and enteritis.	Other diseases of digestive system.
Perak	51	53	25	138	53	344	100	177	1,126	261	427	274
Selangor ...	27	44	10	99	156	247	392	425	1,049	82	617	356
N. Sembilan ...	...	7	1	19	73	56	123	193	515	22	290	92
Pahang ...	14	7	1	22	71	23	43	140	248	137	146	150
Total ...	92	111	37	278	353	670	658	935	2,938	502	1,480	872

State.	CAUSES OF DEATHS.									
	Convulsions.	Diseases of nervous system and sense organs.	Non-venereal diseases of genito-urinary system.	Diseases of pregnancy, child-birth and puerperal state.	Premature birth and diseases of early infancy.	Old age or senility.	Violence (all forms).	Leprosy.	Other causes.	Total.
Perak	2,396	203	178	320	645	1,264	410	...	852	17,003
Selangor ...	1,790	136	195	213	710	932	361	4	205	12,379
N. Sembilan ...	812	33	52	94	241	346	134	...	231	5,714
Pahang ...	466	45	36	82	141	224	93	...	376	4,911
Total ...	5,464	417	461	709	1,737	2,766	998	4	1,664	40,007

PREVAILING DISEASES.

Malaria.—The number of cases of malaria admitted to Government hospitals was 34,986 as compared with 24,776 in 1937. All these cases were accurately diagnosed and can be taken as a reliable indication of the prevalence of the disease.

Anti-malarial measures were maintained throughout all States and it is evident that, to effect an improvement, they should be intensified.

Dysentery, Diarrhoea and Enteritis.—There was an increase in the number of deaths in this group of diseases to 1,948 as compared with 1,783 and 1,696 in the two previous years respectively.

Pneumonia.—During the current year the deaths due to all forms of pneumonia showed a welcome decrease as there has been a progressive increase in late years. There were 2,938 deaths in 1938, compared with 3,137 in the previous year.

Tuberculosis.—Tuberculosis in its various forms was responsible for 1,499 deaths, which is an increase of 86 over 1937 but only 11 more than in 1936, but with the exception of 1937 there has been an increase yearly for some years.

Leprosy.—The number of lepers admitted to the settlement at Sungei Buloh continues to increase; at the beginning of the year there were 1,937, compared with 1,830 and 1,593 at the beginning of the two previous years respectively, while at the end of the year a further increase to 2,178 was recorded.

There were 97 patients discharged, compared to 134 in the previous year, all of whom were bacteriologically negative and free from active lesions.

LEPER ASYLUM, KUALA LUMPUR.

This contains a diminishing number of chronic incurable lepers who are opium smokers. No admissions have been made since 1931 and the number decreased from 183 at the beginning of the year to 157 at the end.

Venereal Diseases.—The increase in venereal diseases reported in 1937 was continued in the year under review by 2,425 to 21,421. This figure is higher than in any year since 1933 as will be seen from the table below:

Year.	Total cases treated.
1932	25,207
1933	23,176
1934	19,704
1935	18,422
1936	17,741
1937	18,996
1938	21,421

HOSPITALS AND OTHER INSTITUTIONS.

The following table shows the average daily number of patients in hospital:

State.	Average daily No. of patients.		Total number of patients admitted.		Deaths.		Deaths per hundred admissions.	
	1937.	1938.	1937.	1938.	1937.	1938.	1937.	1938.
Perak	1,861	1,959	50,893	57,671	3,874	3,758	7.61	6.51
Selangor	1,105	1,263	29,194	35,906	2,249	2,569	7.70	7.15
Negri Sembilan ...	825	960	18,815	23,188	1,385	1,499	7.30	6.46
Pahang	601	686	16,996	19,940	986	1,197	5.80	6.00
Total ...	4,392	4,868	115,898	136,705	8,494	9,023	7.32	6.60

The total number of out-patients treated at hospitals and dispensaries (including travelling dispensaries) apart from those treated at special institutions such as infant welfare centres, venereal disease clinics, etc., was 804,292, the corresponding figure for 1937 was 738,211.

INFANT WELFARE CENTRES.

The attendances at the infant welfare clinics continued to maintain a gratifying increase. There were 195,144 attendances in 1938 as against 183,123 in the previous year.

The work in the established centres progressed and extended. The centres are in charge of a Lady Medical Officer or a Sister and are assisted by a staff of Asiatic Nurses.

Instruction in ante-natal and infant welfare by means of lectures and demonstrations is now being regularly given at outlying villages as well as at centres.

Ante-natal work is being carried out on an increased scale, and includes physical and laboratory examination as well as arrangements for dental treatment. The principal function of the clinics, however, is to teach mothers how to look after their children properly. The health visitors give advice about the care and feeding of infants and children and also advise the expectant mothers regarding diets, etc. Of those attending the centres and branches, the Chinese predominate racially.

CENTRAL MENTAL HOSPITAL.

There were 2,883 patients on the 31st December, 1937. The number of admissions during the year was 1,264 which is the largest number ever admitted in one year. The admissions for 1937 and 1936 were 1,225 and 1,087 respectively. The number remaining at the end of the year 1938 was 3,080. This is the first time that the number of patients has exceeded 3,000.

ADMISSIONS.

Males.		Females.		Total.
896	...	368	...	1,264

The most common forms of mental disorder among the admissions were:

Confusional insanity	502
Senile dementia	214
Dementia praecox	228
Melancholia	67

The total number of patients discharged during the year was 781: of this number, 312 patients were discharged as recovered, 365 as relieved and 104 as unimproved to the care of relatives.

The total number of patients died during the year was 275, which is 71 more than the previous year, giving a death-rate of 6.63 per cent. on the total treated.

The general health of the patients remained good during the year. There was a decrease in the number of cases of malaria; 75 cases were treated as compared with 100 in 1937.

The farms continued to be productive as in former years, and provided the fruit, vegetables and pork required for the hospital.

DECREPIT SETTLEMENTS.

Decrepit settlements at Taiping, Kampar, Kuala Lumpur, Serendah, Kajang and Tampin were maintained. At Sitiawan there is a decrepit settlement for women who occupy the wards of a Government hospital which has been closed as such for several years.

The total average daily number of inmates during the year was 523.

CHAPTER V.

Housing.

The subject of housing in the Federated Malay States may be treated in its relation to buildings within Sanitary Board or urban areas on the one hand and to accommodation in rural districts on the other; in either case it admits of a dual classification, i.e., housing of (1) salaried or employer classes, and (2) wage-earning or labouring classes.

HOUSING WITHIN SANITARY BOARD AREAS.

Control over housing in Sanitary Board areas is exercised through the Building By-laws of the Sanitary Boards Enactment (Cap. 137). Towns and villages which consist of a score or so of houses, but which are not Sanitary Board areas proper, are generally brought under modified control by applying some of the provisions and by-laws under Part X of the Enactment. The houses occupied by salaried Government servants are erected by Government according to standard approved plans and are divided into certain classes or grades according to the salary of the officer concerned, the occupant normally being charged the monthly rent laid down for the particular class or grade. The houses of the merchants, traders and professional practitioners either stand in their own grounds (this is almost invariably the case among Europeans) or conform to the shop-house type. Such shop-houses are generally two-storied, the occupier plying his trade downstairs and living above his work.

For Government employees of the wage-earning class, e.g., labourers in the Sanitary Boards, Public Works and Health Departments, lines or barracks are provided free of rent and are erected according to plans approved by the Public Works and Health Departments. In the larger towns such lines are of permanent, in the smaller Sanitary Board areas of semi-permanent construction. Periodical inspections of such lines ensure that the general living conditions remain satisfactory.

Non-Government labourers live either in the permanent Chinese shop-house type or in the semi-permanent or temporary Malay house type of dwelling. Regular inspection of the shop-house type of dwelling, which is almost exclusively occupied by Chinese, is carried out by the Sanitary Board staff, to see that no overcrowding takes place.

The Malay type of labourer's house is usually built off the ground and constructed of plank-floors and walls with palm-thatch roofs. As a rule these Malay houses are erected by the owner of the land and rented out to tenants, but not infrequently the sub-lessee pays a ground rent to the landlord and erects the building himself. Houses of this type erected on the outskirts of towns have until recently normally been of a temporary type; however, most Sanitary Boards nowadays insist on the erection of houses of a more permanent pattern and a considerable improvement may, therefore, confidently be looked to for the future.

All persons living within Sanitary Board areas receive in return for assessment payments certain services in respect of water, drainage, anti-malarial works, lighting, scavenging and conservancy.

Encouraging results have followed efforts to improve housing conditions in Sanitary Board areas by the giving of free advice to prospective builders on construction and siting problems.

Housing Outside Sanitary Board Areas.

(1).—ACCOMMODATION FOR THE SALARIED OR EMPLOYER CLASS.

All houses erected by Government conform to some standard type plan. There is no restriction of design or construction on private individuals, for the most part estate or mine managers and fairly well-to-do Asiatics, but their houses are, as a rule, of permanent construction with ample accommodation and ventilation.

(2).—ACCOMMODATION FOR THE WAGE-EARNING OR LABOURING CLASS.

Government employees are housed in rent-free lines or barracks, which follow standard type plans as in the case of similar buildings within Sanitary Board areas. Such lines have cement drains, wells and latrines and are generally sited in a small area of land where the labourers grow vegetables and other products for their own consumption. The minimum dimensions of the rooms are 10′ × 10′ and rules exist for the prevention of overcrowding.

Periodical inspections of these lines are carried out by officers of the Labour and Health Departments and also by Public Works Engineers in each district.

Housing accommodation for labourers, other than Government labourers, may be divided into two classes, viz.: housing of labourers on (*a*) estates and mines and (*b*) in villages or elsewhere.

The housing of estate labourers is controlled under the Labour Code. Labourers (Indians, Javanese and Chinese) under European management are accommodated in rent-free lines erected at estate expense. The lines which are usually of the permanent type are built in blocks of roughly a dozen rooms apiece, or in rows of detached or semi-detached huts, with cement floors (if built on the ground level), cement drains, plank walls, tiled roofs, and an adequate drinking and bathing water supply and latrines.

On mines the lines are generally of a temporary nature made of palm thatch with earth or concrete floor, and constructed to provide the maximum amount of coolness and ventilation; though with the contemporary growth of motor-bus services an increasing proportion of mining labourers live in villages or towns near their work. Water and lighting is provided free of charge by the mine owners. Sanitary arrangements are primitive but latrines are provided in all cases. Officers of the Mines Department are nowadays responsible for inspection of sanitary conditions on mines.

The health of the labour forces on estates and mines has been very good and there have been no serious epidemics during the year.

No control is exercised over accommodation for labourers other than those mentioned above. The majority are Malays living on their own land; their houses are of such design, structure, and size as the owner can afford. The Malays usually choose for their house a site where air, light and water are abundantly to hand, and this explains to a great extent their general good health and freedom from diseases such as pulmonary tuberculosis, so commonly found in Chinese tenements. The District Officer with the help of the Malay headman of the sub-district, after noting on his periodic visits any malarial or insanitary conditions which are particularly likely to endanger the health of the neighbourhood, takes steps to abate the nuisance. Of the non-Malay labourers, Chinese comprise by far the greatest part. They are engaged chiefly in vegetable gardening, timber cutting, pig-rearing or in the cultivation of small holdings of rubber, coconuts, tapioca, and other products. If they work on their own land they live in small temporary huts; if engaged in timber cutting, in large temporary communal sheds. While on the one hand the sanitary surroundings of such dwellings leave much to be desired and from their remoteness no regular inspection by Health Officers is possible, on the other hand the open air life and the extremely airy construction of their temporary dwellings enable these Chinese labourers to maintain a high level of heath.

BUILDING SOCIETIES.

There are no building societies in the Federated Malay States but there are in existence the Planters' Loans Board and a large number of smaller co-operative societies which in their initial stages rely for help and guidance on the Government Co-operative Department. Members may, with certain restrictions, borrow money from the co-operative society to which they subscribe, and it is hoped that many will continue to make use of this opportunity to erect houses of their own.

CHAPTER VI.

Natural Resources.

MINERALS.

The minerals of commercial importance at present known in the Federated Malay States are tin-ore, coal, gold, tungsten ores, iron-ore, ilmenite and kaolin. The production, exports and values of these minerals during 1938 being:

	Production.	Value.	Exports.	Value.
		$		$
Tin-ore	54,577 tons	64,480,379	54,410 tons	64,279,974
Coal	477,908 ,,	3,226,937	51,156 ,,	262,434
Tungsten ores ...	602 ,,	769,716	301 ,,	385,280
Iron-ore	923 ,,	9,230	365 ,,	3,699
Ilmenite.... ...	6,462 ,,	6,462	6,462 ,,	6,462
Kaolin	385 ,,	7,700	.06 ,,	2
Gold	40,209 ounces	2,262,130	29,806 ounces	1,676,860

Deposits are also known of manganese-ore, bauxite, galena, arsenopyrite, pyrite, chalcopyrite, fluorite, phosphate, quartz and other minerals, though the value of these is not yet proved either because economic quantities are not known to be present or because there is no local market for them, and because the cost of freight to countries where there is a demand would be prohibitive. So far as is known, there are no supplies of oil in economic amount.

TIN-ORE.

Tin-ore is the greatest mineral asset of the Federated Malay States, which country is the biggest tin producer in the world. Cassiterite, tin dioxide, is the only important ore of tin, and was deposited as tin-bearing quartz-veins and lodes in cracks and fissures in the granite and over-lying sedimentary rocks. The present recovery of tin-ore is mainly from the alluvial deposits that have resulted from the erosion of these lodes and veins, although one of the largest and most productive lode tin mines in the world is operating in Pahang. The average assay value of Malayan tin-ore is unusually high at 75.5 per cent.

The following methods of mining tin-ore in the Federated Malay States are employed.

Method of mining.	Labour employed.
Opencast	11,623
Underground	6,063
Hydraulic—	
Gravel pump	23,246
Sluicing	3,797
Bucket dredging	12,934
Total	57,663

Production has been regulated under an International Tin Control Scheme introduced on 1st March, 1931, renewed on 1st January, 1934, and again on 1st January, 1937, until 31st December, 1941. The standard tonnage of 71,940 allotted to Malaya was increased as from 1st July, 1938, by the International Tin Committee to 77,335 tons. Even so, as part of this amount must be shared by the Unfederated Malay States, Malacca, dulang washers and Sakai workings, and as the Federated Malay States mines' domestic assessment amounts to 98,230 tons metal, the amount available for the Federated Malay States mines is only 74.3 per cent of their normal full production.

The international and domestic quota releases during 1928 were :

	International.	Domestic.
1st quarter	70%	56%
2nd ,,	55% + 7.56%	38% + 5%
3rd ,,	35% + 10%	25.5% + 7.6%
4th ,,	35% + 10%	25% + 7.8%

During the second quarter, Malaya operated on an additional International quota of 7.56 per cent., being her share of tonnages surrendered by Belgian Congo, Bolivia and French Indo-China.

A Buffer Stock Scheme came into force in July with the object of maintaining the price of tin between £200-£230 a ton.

In view of the possible effect of the reduced quota upon the Federated Malay States mine labour situation, a "Tin Bonded Stock Scheme" was introduced during June of this year, whereby producers were permitted to deliver a maximum of 2,900 tons of metal to smelters in bond against advances made. The scheme, however, did not appeal to the miners in general, only 182 tons being delivered.

The greatly reduced quota, from 110 per cent. during the latter part of 1937, resulted in 40 dredges and 263 gravel pump mines closing down and a decrease of over 30,000 in the labour force during 1938, which was absorbed to a large extent by Government unemployment relief work.

The export, value and export duty of tin and tin-ore from the Federated Malay States during the last three years were:

	1936.	1937.	1938.
Tons exported ...	64,719	75,394	41,077
Value	$109,430,652	$151,418,742	$64,279,974
Export duty ...	$13,410,254	$19,487,585	$8,122,685

Practically the whole of the tin and tin-ore produced is exported.

The following table gives the prices ruling during the last three years in dollars per pikul tin and sterling per ton tin.

	1936.					1937.					1938.				
	£	s.	d.	$	c.	£	s.	d.	$	c.	£	s.	d.	$	c.
Highest ...	241	10	0	121	25	303	15	0	149	00	218	0	0	111	75
Average ...	200	5	9	100	39	240	16	4	119	75	190	4	2	95	59
Lowest	172	5	0	85	62¼	180	5	0	85	00	153	17	6	76	00
Fluctuation ...	69	5	0	35	52½	123	10	0	64	00	64	2	6	35	75

COAL.

Reckoned by the value of outputs, next to tin-ore coal is the most important mineral, and, apart from the revenue it brings from royalties, it is valuable as a source of power for use in local industries. The total area covered by the known outcrops of coal-bearing strata in the Federated Malay States is small, and it is doubtful if deposits of economic value will ever be found other than the one occurrence at Batu Arang mined by Malayan Collieries, Limited, where the total production from 1915 till the end of 1938 has been more than eight million tons with large reserves still available. The coal would be more accurately described as high grade lignite and has the unfortunate characteristic of being liable to spontaneous combustion, so that careful handling is necessary during extraction and while it is in store.

The following is an analysis:

Moisture	21 per cent.
Ash	9 ,,
Volatile matter	35 ,,
Fixed carbon	35 ,,

Calorific value:

as received	9,000 B. Th. U. per lb.
dry coal	11,300 ,, ,,
dry ash-free	13,000 ,, ,,

The coal at Batu Arang is mined both by open cast method employing shovel and dragline excavators and by underground method on the longwall system where machinery of a modern type was installed during the year to replace the old fashioned methods. Hydraulic sand stowage from the open cast to the underground workings is employed.

Production, exports and value during the last five years were :

	Production. TONS.	Value. $	Exports. TONS.	Value. $
1934	321,461	1,819,286	33,831	188,963
1935	377,441	2,345,497	40,685	223,540
1936	502,823	3,323,971	42,759	222,798
1937	627,890	4,286,534	50,605	259,592
1938	477,908	3,226,937	51,156	262,434

GOLD.

The output and exports of gold for the last five years were :

	Lode ozs.	Alluvial ozs.	Total ozs.	Estimated value. $
1934	24,310	5,910	30,221	1,783,280
1935	22,909	6,862	29,771	1,812,606
1936	29,449	8,330	37,779	2,115,273
1937	23,807	10,021	33,828	1,894,047
1938	30,514	9,695	40,209	2,261,752

Nearly all of this year's lode production was mined at the Raub Australian Gold Mine, while alluvial deposits were mined in Perak.

The principal lodes at the Raub Mine occupy almost vertical fissures formed by fracturing along compression-faults parallel with the bedding-planes of hard steeply-dipping calcareous shale. Production from this mine alone during the last three years amounted to :

1936.	1937.	1938.
26,856 ozs.	22,782 ozs.	29,750 ozs.

Gold mixed with tin-ore is obtained from the alluvium of the Batang Padang district, the production of gold during the last three years were

1936.	1937.	1938.
7,789 ozs.	7,043 ozs.	5,444 ozs.

A geological survey has shown that there is but little chance of finding payable lodes in this area. The alluvial gold has been derived by erosion from numberless small veins of quartz in schist, phyllite and foliated granite, and most of this year's production at the Bruseh Estate Gold Mine has come from hydraulicing a hill of weathered schist and phyllite.

The high price of gold during recent years has encouraged Chinese miners to open up gravel pump mines on the alluvial deposits, the gold recovery from which has increased to a large extent. Several lode gold deposits which were mined over thirty years ago are also being either mined or prospected. The old Raub Hole in Pahang now supplies an appreciable amount of the Raub Australian Gold Mine output. At the Selensing Mine, also in Pahang, a mill is being erected to treat eluvial gold deposits while the old underground workings are being dewatered. The old Batu Bersawah Gold Mine in Negri Sembilan has been dewatered by means of a prospecting shaft, and work of cross cutting is now in progress with a view to proving payable values below the old workings.

TUNGSTEN ORES.

The metal tungsten continues in demand for the reason that more than 90 per cent. of the world's supplies of it are absorbed by the now completely revived steel industry. Tungsten-steel is very tough and finds a special use in the manufacture of armaments and high-speed tools because the alloy retains its temper at great heat.

Scheelite.—Of the two main tungsten minerals, scheelite, calcium tungstate, is more important in the Federated Malay States than wolfram, tungstate of iron and manganese, because there is a rich deposit at Kramat Pulai, near Ipoh. The exports during the last three years being:

1936.		1937.		1938.
1,364 tons	...	821 tons	...	281 tons

A large ore-body near the margin of a granite intrusion is constituted almost entirely of fluorite and scheelite, lying under a roof of extremely hard schist, where it originated from the replacement of pure crystalline limestone. An extensive scheme of prospecting by diamond drills is in progress, searching for similar underground deposits in neighbouring localities where the geological structure seems to have been favourable, but no new ore-body has so far been discovered. Parts of the original mass of fluorite and scheelite have been located that has been separated from their parent by faulting, but large reserves have not been proved.

Wolfram.—Small quantities of wolfram are mined in Perak, Selangor and Negri Sembilan, exports for the last three years being:

	1936.		1937.		1938.
Exports ...	3 tons	...	27 tons	...	20 tons
Value ...	$1,659	...	$12,964	...	$19,946

IRON-ORE.

In spite of the large exports from the Unfederated Malay States, the only production of iron-ore in the Federated Malay States during the year was from a deposit of haematite near Ipoh, Perak, where about 923 tons were mined, to be sold for local use as "ragging" in dredge-jigs. Extensive deposits of mixed haematite, magnetite and limonite have also been proved in Ulu Rompin, Pahang, and it is probable that there are considerable supplies elsewhere, hidden by the thick cover of soil and vegetation that obscures so much of the surface of the country.

ILMENITE.

Approximately 6,462 tons of "amang" consisting mainly of ilmenite, a compound of titanium, iron and oxygen, valued at $6,462 were exported from the Federated Malay States in 1938; 2,279 tons to the United Kingdom, 1,739 tons to Germany. 1,111 tons to Poland, 1,024 tons to Belgium and 309 tons to Holland. About 240,000 tons of amang are easily accessible in dumps, but as it is located at some distance from the sea, the cost of transport to steamers prevents the Federated Malay States from being a serious rival to India where the deposits occur on the seashore.

In this new industry a chemical process is employed to extract titanium oxide from the amang. Titanium oxide is a compound that is used as a filler and pigment in making brush and spray lacquers, ideal for the purpose because of its covering power, perfect whiteness, and because it is chemically inert to the solvents used in mixture with it. It is employed also in the manufacture of bakelite, linoleum, coated textiles, rubber, wall-papers, printing inks, glass and enamel ware.

KAOLIN.

Kaolin or china clay is mined on a small scale near Tapah in Perak and at Cheras in Selangor, for local use as a filler in the manufacture of rubber goods. Outputs and values for the last three years were:

	1936.	1937.	1938.
Outputs	121 tons	263 tons	385 tons
Value	$2,420	$5,260	$7,700

There are large supplies of kaolin available in the Tronoh and Bidor districts and other areas could be found if required, but a small quantity is sufficient to supply the needs of the local industry.

AGRICULTURE.

Agriculture and tin mining continue to be the two most important industries in the Federated Malay States. Crops are grown on properties ranging in size from small-holdings of between one-half and ten acres to large estates varying in extent from one hundred to several thousand acres.

The following review of agriculture in the Federated Malay States in 1938 is divided into three parts: A.—crops grown on large estates and small-holdings: these include the major permanent crops, rubber and coconuts, together with coffee, bananas, pineapples and tea. B.—crops grown solely by large estates, i.e., the oil palm, and C.—crops grown exclusively by Asiatics, which comprise the important rice crop, tobacco, arecanuts, fruit and vegetables. In some instances only Malayan statistics are available, while in others the agriculture of the Federated Malay States is so interlocked with industries in other parts of the country that it is impossible to avoid reference to facts relating to areas outside the Federated Malay States.

A.—CROPS GROWN ON LARGE ESTATES AND ON SMALL-HOLDINGS.

Rubber.—The total area under rubber in the Federated Malay States at the end of 1938 was estimated to be 1,613,609 acres made up as follows:

	1 Estates of over 100 acres.	2 Holdings of less than 100 acres.	3 Total.	4 Increase or decrease compared with 1937.
	Acres.	Acres.	Acres.	Acres.
Perak	306,882 ...	256,264 ...	563,146 ...	− 10,187
Selangor	351,906 ...	144,577 ...	496,483 ...	+ 932
Negri Sembilan ...	283,334 ...	97,960 ...	381,294 ...	− 1,021
Pahang	90,304 ...	82,382 ...	172,686 ...	+ 840
Total . .	1,032,426 ...	581,183 ...	1,613,609 ...	− 9,436

The immature area on estates amounted to 75,777 acres, that on small-holdings is not known.

Production and Consumption.—The production of rubber during the past four years is shown below:

State.	By estates of 100 acres and over.			
	1935.	1936.	1937.	1938.
Perak	41,917 ...	39,925 ...	53,743 ...	39,901
Selangor	47,235 ...	45,633 ...	58,662 ...	46,607
N. Sembilan ...	35,885 ...	31,337 ...	40,944 ...	32,356
Pahang	8,030 ...	8,110 ...	12,906 ...	10,864
Total ...	133,067 ...	125,005 ...	166,255 ...	129,728
	By small-holdings of less than 100 acres.			
Perak ... ... Selangor ... ... N. Sembilan ... Pahang	67,380 ...	62,596 ...	91,134 ...	54,330
Total ...	200,447 ...	187,601 ...	257,389 ...	184,058

Local consumption of rubber in the Federated Malay States amounted to 196 tons, so that practically the whole production was exported. The majority of the crop continued to be marketed in the form of standard smoked sheet, but appreciable quantities of rubber were again exported in the form of latex; the total quantity exported from Malaya in this form during the year was estimated to amount to 14,931 tons (on the basis of dry rubber content) as compared with 19,408 tons in 1937.

Prices.—Rubber smoked sheet at the beginning of the year was 22¾ cents per lb. The price improved during January and February to 24⅜ cents but fell heavily in March to 16⅜ cents and to 16 cents at the beginning of April. The same month, however, saw a recovery to 21⅜ cents, and, after a slight fall in May, a further steady improvement to 29¼ cents in October, the year closing at 28¼ cents.

The average prices per lb. for the year in the principal markets are shown below together with corresponding figures for 1937.

	1937.		1938.
Singapore (cents, Straits) ...	32.09	...	24.39
London (pence, sterling) ...	9.42	...	7.29
New York (cents, gold) ...	16.30	...	14.56

Rubber Regulation.—The International Agreement 1934-38 for the regulation of rubber production continued in operation during the year. Malaya's quota was 602,000 tons, and the releases were: for the 1st quarter 70 per cent.; 2nd quarter 60 per cent.; 3rd quarter 45 per cent.; 4th quarter 45 per cent., averaging 55 per cent. over the whole year.

The International Agreement, which was due to terminate on 31st December, 1938, was renewed for a further period of five years from 1st January, 1939. The terms of the agreement have been revised and new planting will be permitted from 1st January, 1939, to 31st December, 1940, up to 5 per cent. of the total planted area, and after 31st December, 1940, up to percentages to be fixed by the International Regulation Committee. Unconditional replanting is also permitted, but the Committee has the power to review the position and limit replanting after the 31st December, 1940.

Conditions on Estates and Small-holdings.—Under the International Rubber Agreement, which terminated on 31st December, 1938, replanting was permitted to the extent of 10 per cent. of each owner's holding in any one year and to a total of 20 per cent. of the holding during the period 1st June, 1934, to 31st December, 1938. The area replanted during 1938 was 18,132 acres.

Estates generally have been maintained in good condition. Improvements commenced during the last year or two have been continued. The two principal problems regarding cultivation on estates have been—(*a*) the method of planting, i.e., budding in the field versus budded stump planting and (*b*) choice of planting material. The uncertainty of predicting rainfall does not generally appear to justify the risk of budded stump planting; the planting of germinated seed at stake for subsequent budding in the field is still advocated. It has been found that the four clones, Tjirandji 1, Pilmoor B. 84, Prang Besar 86 and 25 are at present the best all round clones for the majority of soils. Manuring has continued to increase in popularity and is developing into a standard practice on many estates. The scheme for experimental planting of new land was completed in 1938.

The total bud-grafted area in 1938 was 138,140 acres as compared with 120,927 acres in 1937. Arrangements were made for the establishment of budwood multiplication nurseries at suitable selected Agricultural Stations throughout the country for distribution, in due course, of budwood to small-holders. By this means it is hoped that there will be an adequate supply of budwood available in 1940 for such small-holders as may desire to plant budded rubber.

The area out of tapping on estates in the Federated Malay States at the end of 1938 was estimated to be 258,992 acres, or 27.2 per cent. of the estimated acreage of tappable rubber. In addition, 171,908 acres (18.1 per cent.) were being rested under rotational tapping systems. Surveys of the area of small-holdings out of tapping were made and indicated that about 26.9 per cent. of the total area was untapped during the first quarter of the year and 36.4 per cent. at the end of the year, as compared with 16.0 per cent. at the end of 1937.

It will be seen, therefore, that the number of small-holdings out of tapping increased considerably during 1938 and this increase was due primarily to the reduced quota operative during the year with the corresponding reduced coupon allowance to small-holders. Another factor was the low price ruling for uncouponed rubber which ranged from $5 to $6 per picul, as it is generally considered uneconomic to tap if the price of this product falls below $6 per picul.

The trade in coupons without rubber and in uncouponed rubber has continued throughout the year. There has also been a certain amount of trade in "share certificates", each certificate conferring planting rights for planting 1/20th of an acre. Prices for these fluctuated widely but the average value of a certificate was probably $1.50. These have, in some cases, been sold to local rubber dealers at a price of less than $1 per share by small-holders who did not fully understand their purpose.

The Asiatic staff of the Small-Holders' Advisory Service which is maintained by the Rubber Research Institute comprised 14 officers in the Federated Malay States distributed as follows: Perak four, Selangor four, Negri Sembilan three, Pahang three, as compared with a total of 10 in 1937. These officers continued to work under the supervision of the Agricultural Officers of the Field Branch of the Department of Agriculture but, in May, a Small-Holders' Advisory Officer was appointed by the Rubber Research Institute with the object of effecting a closer liaison between the Rubber Research Institute on the one hand and on the other hand the Agricultural Officers and the Asiatic staff of the Institute's Advisory Service, thus forming machinery for keeping both Agricultural Officers and the Asiatic Advisory Officers up to date in the technical work of the Research Institute.

Propaganda for better tapping was continued by the Asiatic Rubber Instructors throughout the year, but improvement in this direction is slow.

Instruction in sheet preparation was continued during 1938 and in some areas this was intensified by the appointment of Asiatic Rubber Demonstrators. By the end of 1938 most of the rubber produced by small-holders was in the form of sheet with a consequently slightly greater profit to the producer. The price grading scheme introduced in Pahang in 1935 was tried in parts of Selangor and Perak but the results have been disappointing.

Pests and Diseases.—Rats have become a serious pest on many replanted areas and in some new planted areas and special measures have been developed to combat them. The cockchafer pest has continued to spread, and although the total area affected has not reached alarming dimensions the position is being carefully watched and experiments in preventive measures are being undertaken. Thrips and mites continued to give a certain amount of trouble in young rubber areas, and control was maintained by sulphur dusting. Giant snails also continued to be a pest of young areas. "Meta" brand mixture is now an established method for the immediate eradication of this pest, followed by the use of calcium arsenate bricks to maintain control. Mouldy rot is still the most serious disease affecting small-holdings. The Department of Agriculture continued to sell approved fungicides at cost price to small-holders and Asiatic Rubber Instructors helped in their distribution. "White ant" treatment was more generally carried out on small-holdings than was the case in the past. Chemicals for this purpose were supplied in some districts at cost price through the Department of Agriculture.

The All-Malayan Small-holders Rubber Competition was held in August whereat selected prize winning exhibits from the District Shows were finally judged at Kuala Lumpur.

Coconuts and Coconut Products.—Coconuts are grown both as an estate crop and on small-holdings throughout the Federated Malay States. Coconut cultivation is mainly confined to the Bagan Datoh area, the Krian district and the Dindings in Perak, and to the coastal areas of the districts of Kuala Selangor, Klang and Kuala Langat in Selangor. The estimated acreage under cultivation are shown below:

	Area on estates of over 100 acres.	Area on holdings of less than 100 acres.	Total.
Perak	52,345	64,674	117,019
Selangor	37,890	72,420	110,310
Negri Sembilan	1,069	5,025	6,094
Pahang	2,842	15,321	18,163
	94,146	157,440	251,586

There is a considerable trade in fresh nuts from small-holdings on coastal areas to inland districts.

Prices.—Prolonged low prices for copra have had a most depressing influence on the industry. The Singapore price for sundried copra opened at $4.75 per picul and dropped to $3.50 in the middle of February. The price remained at about this figure, with minor fluctuations until the end of September, when it fell to $3.05. The price on 31st December, 1938, was $3.25 per picul, and the average price for the year $3.53.

The quality of the copra produced on estates was well maintained. Among the small-holders there was some deterioration of the product as compared with the previous year; the period of drying was generally shortened and under-dried copra was commonly offered for sale. In Malayan export centres, following sustained low prices and keen competition for copra between exporters and millers, marketing methods have been changed. There have been complaints of a decline in the quality of Malayan copra as a result of this change.

The serious problem of "rubberiness" in copra has continued to receive attention but no definite recommendation can yet be made for prevention or treatment.

Pineapples.—The area under pineapples in the Federated Malay States at the end of 1938 was 11,395 acres, as compared with 12,000 in 1937. Of this area 8,597 acres were in Selangor. In Selangor 1,200 acres of pineapples have been cut out in favour of permanent tree crops, and a further reduction in the pineapple acreage is likely to occur in the future. Some new areas have been opened up but other areas maintained in production are becoming worked out and are no longer producing good sized fruit.

Prices.—The average Singapore price per case of 48 tins of 1¼ lbs. each of Malayan pineapples (cubes) and of 100 first quality fruit were respectively $2.79 and $1.40. Corresponding price for 1937 were $3.02 for cubes and $2.27 per 100 first quality fruit.

Arrangements for the inception of a Central Pineapple Packers' Board were nearly completed at the end of the year.

Regulations to limit the number of sizes of cans used in canning pineapples were brought into force and the Malayan Mark Pineapple (Grading and Marking) Regulations became law. This last is a voluntary grading scheme and had not yet, at the close of the year, been adopted by any packers.

Canning Research.—The Governments of the Federated Malay States, the Straits Settlements and Johore provided funds in 1937 for the erection of a Canning Research Station situated five miles from Johore Bahru. The buildings were completed by the end of August.

The laboratory was fully equipped, but some delay in delivery of machinery for the demonstration factory occurred. It is, however, hoped to have the plant in operation before the end of March, 1939.

Coffee.—Coffee is grown both on estates and small-holdings either as a sole crop or interplanted with other crops. In the Federated Malay States there are 12,197 acres under coffee, the most important centre of production being Selangor. The crop is grown by numerous Malay small-holders, particularly in the Coastal District of Kuala Langat. Practically none of the coffee produced in Malaya is exported. Prices for local coffee in Selangor ranged between $11 and $28 per picul according to quality and locality. In 1938 the imports of coffee into the Federated Malay States amounted to 1,510,646 lbs. valued at $163,050.

In the lowland districts, the varieties of coffee cultivated are either of the Robusta or Liberian type. In Cameron Highlands the area under Arabian coffee has been reduced to less than 60 acres, some 286 acres having been cut out during the year.

Locally grown coffee has a ready market in Malaya and is retailed either as Malayan coffee or blended with imported coffee. It has been found that the local Asiatic market shows a preference for Liberian coffee. Statistics of the amount of locally grown coffee produced are not available.

Tea.—The area under tea in the Federated Malay States at the end of 1938 was 5,241 acres, as compared with 3,439 acres at the end of 1937. Of this total 3,223 acres were planted on upland estates, i.e., on Cameron Highlands, and 2,018 acres on lowland estates on plains in Selangor and Perak, and on small-holdings owned by Chinese in Selangor and Negri Sembilan.

The production from small-holdings is estimated to be 226,000 lbs., that of estates was 957,006 lbs. of made tea, as compared with 822,439 lbs. in 1937.

Of the total Malayan produced estate tea, of which the major part comes from the Federated Malay States, 747,303 lbs. were exported to London and 434,624 lbs. sold locally. Corresponding figures for the previous year were 583,000 lbs. and 411,500 lbs. respectively.

Tea Restriction.—The first International Tea Agreement, to which Malaya subscribed, terminated at the end of March, 1938. Negotiations between the Malayan Governments and the International Tea Committee failed, and at the suggestion of Government the United Planting Association of Malaya formed a Tea Section of that Association and appointed a delegate in London to negotiate with the International Tea Committee. By the end of the year the conditions under which Malaya was prepared to enter a five-year agreement had not been settled.

This failure to reach an agreement hampered the development of the industry in this country as the Tea Controller could not prejudice the new agreement by permitting extensive new planting of this crop.

Derris.—The area under this crop at the end of 1938 was 4,106 acres, as compared with 4,854 acres in 1937.

Derris root sold on rotenone content averaged $21.67 per picul in Singapore and root sold on ether extract basis $13.63 per picul.

Derris root is employed as an insecticide for which purpose it comes into direct competition with another vegetable produce, cubé, containing similar toxic qualities. Competition between these two products, on the American market, was keen and buyers were influenced to purchase cubé in preference to derris purely on the price factor.

Net Malayan exports were 676 tons valued at $306,801, as compared with 573 tons valued at $384,000 in 1937

B.—CROPS GROWN SOLELY ON LARGE ESTATES.

Oil Palm.—This is the only crop grown solely on large estates. The total area planted under oil palms at the end of 1938 in the Federated Malay States was as follows:

	Acres.
Perak	18,038
Selangor	14,570
Negri Sembilan	2,494
Pahang	1,554
Total ...	36,656

This represents an increase of 1,376 acres in the area planted as compared with 1937.

All of the produce was exported, with the exception of small quantities of oil used locally for soap manufacture. Production of oil palm and kernels in the Federated Malay States during the past five years is shown in the following table:

Year.	Palm oil. Tons.	Kernels. Tons.
1934	12,965 ...	2,013
1935	17,339 ...	2,711
1936	23,081 ...	3,791
1937	27,733 ...	5,095
1938	28,979 ...	5,159

It is anticipated that the output of the industry will show annual increases for some years to come as younger areas come into full bearing.

During the year prices of palm oil and kernels fell considerably from the opening prices of £17 and £10 10*s*. per ton respectively, and the year closed at £13 and £8 10*s*. per ton respectively. The average prices for the year were as follows: Palm oil £14 3*s*. 10*d*. per ton and palm kernels £8 19*s*. 3*d*. per ton. There are now 23 oil palm factories operating in the Federated Malay States, including the factory at the Central Experiment Station, Serdang.

Rats continued to cause trouble on oil palm estates.

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—The area planted with rice in the Federated Malay States during the season 1937-38 is estimated to be 176,880 acres of which 174,920 acres were under "wet" cultivation and 1,960 acres under "dry" cultivation. The total area planted in the Federated Malay States in 1936-37 was 185,730 acres. Rice is grown exclusively by Asiatics on small holdings of an average size of about 2½ acres. It has been estimated that a small holding of this size will, under local conditions, yield sufficient rice to feed a family of six persons and will leave a small surplus available for sale. Where rice is grown as a commercial crop the average size of a holding owned by an individual tends to be well above the general average, in Krian, for example, the normal holding is about five acres.

The crop is cultivated both as comparatively extensive stretches on coastal alluvial lands and as smaller units in narrow valleys.

The area planted with rice in the Federated Malay States during the season 1937-38 and the total yields are shown below:

Area of Land Planted in Malaya and Yields of Padi.

Season 1937-38.

Territory.	Wet.		Dry.		Total.	
	Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
Perak	90,230	24,281,000	1,430	260,000	91,660	24,541,000
Selangor ...	14,970	3,572,000	180	46,000	15,150	3,618,000
N. Sembilan ...	33,630	9,683,000	40	6,000	33,670	9,689,000
Pahang	36,090	7,522,000	310	41,000	36,400	7,563,000
Total ...	174,920	45,058,000	1,960	353,000	176,880	45,411,000

Season 1938-39.—It is anticipated that in most States the area under cultivation will at least be equal to that of the previous season. In the Krian area the crop should be satisfactory unless very unseasonable weather is experienced. The acreage is rather more than last year. In other parts of Perak the prospects are promising. Reports from Pahang state that there have been difficulties in the inland areas due to inadequate water supplies; on the coastal areas the crops may be rather better than in the previous season. It is estimated that the total acreage in Pahang will not be less and may, perhaps, be more than in the 1937-38 season.

Rat Control.—Of the larger areas there was satisfactory control in Krian in Perak and at Panchang Bedena in Selangor. Considerable losses due to these pests occurred on the Sungei Manik area in Perak and the Tanjong Karang and Sempadan Mukim areas in Selangor, where time will be required for completion of proper control measures.

High Yielding Strains.—The demand for high yielding strains continued to be confined chiefly to areas where padi is grown as a commercial crop.

No seed farms were in operation in either season as it had been found that mutual distribution of seed among smallholders themselves is an important factor in the dissemination of a strain once a grower is satisfied with its qualities. Padi test stations can supply sufficient seed to keep the strain reasonably pure in the fields.

Government Rice Mills.—There are two Government Rice Mills at Krian and one at Temerloh, Pahang. The Krian mills purchased a total of 12,272 tons of padi during the year and at Temerloh the purchase of 228 tons of padi constituted a record. The mills at Krian produced 74,981 bags of rice of which 36,762 were parboiled and 38,219 white and undermilled rice. The price for padi at Krian averaged $2.14 per picul throughout the year. Many small power-driven rice mills were erected in the main producing areas of the Peninsula. Ten such mills were in operation in Perak.

The average wholesale prices of rice per picul in Singapore in 1938 were as follows:—Siam. No. 2 ordinary $4.26; Rangoon No. 1 $3.74, Saigon No. 1 $3.94. The actual average price of rice consumed in this country during the year was $4.17 per picul, as compared with $4.68 per picul in 1937.

Tobacco.—The amount of tobacco produced locally is not known, but is altogether inadequate to satisfy the demand. The areas under this crop are mostly small and scattered and are cultivated mainly by Chinese market gardeners. The leaf is principally used for the manufacture of very cheap cheroots and cut tobacco for the poorer classes.

The area under tobacco in the Federated Malay States at the end of 1938 is estimated to be about 1,777 acres.

Prices of locally grown tobacco in Malaya varied greatly in different localities and ranged between $27 and $160 per picul for first quality and $8 and $112 for third quality.

Fruit other than pineapple.—The increased interest in fruit cultivation noticeable during recent years has continued. There has been a fairly steady demand for budded plants from Agricultural Stations.

The total area under fruit, other than pineapples, in the Federated Malay States in 1938 was 55,084 acres of which 16,841 acres were under bananas. The total area in 1937 was 50,114 acres.

The total Malayan net imports of fruit (fresh, dried and preserved) amounted to 25,653 tons, as compared with 28,797 tons in 1937.

Vegetables.—The total area under vegetables, which is considerable, is not known, as the industry is almost exclusively in the hands of Chinese market gardeners who hold their land under Temporary Occupation Licences. So far as it has been possible to collect data, it appears that the total planted area in the Federated Malay States is approximately 23,619 acres. The most popular vegetable among market gardeners is thought to be the sweet potato. It is estimated that 2,337 acres are planted with this crop, which is used both for feeding pigs and for human consumption. The area under vegetables on Cameron Highlands has increased during the year to 195 acres.

Owing to the nature of the vegetable industry it is not possible to obtain figures of production, which is, however, large but quite inadequate to meet local demands. This is indicated by the fact that during 1938 a total of 66,753 tons of vegetables, fresh and preserved, including potatoes was declared as net imports into Malaya.

Arecanuts.—The area under this crop in the Federated Malay States was 5,080 acres, as compared with 4,624 acres in 1937. Owing to the nature of the industry figures of production are not available. The average declared price of arecanuts was $7.64 per picul, as compared with $7.71 per picul in 1937.

GENERAL.

Sir Frank Stockdale, K.C.M.G., C.B.E., Agricultural Adviser to the Secretary of State for the Colonies, paid a visit to Malaya from 27th January to 4th March, 1938, and made a comprehensive study of agricultural conditions.

There are 17 agricultural stations, two padi breeding stations, one other main padi station and 24 padi test plots in the Federated Malay States. These were maintained in satisfactory order during the year. At the Central Experiment Station, Serdang, work was continued on a large number of crops; the station continued to attract many visitors. Work at the Coconut Experiment Station at Klang proceeded in accordance with the established programme together with experimental work on copra production. Rice breeding work was continued at the two Experiment Stations at Titi Serong and Tallang, while a large number of experiments on tea were continued at the Experiment Station at Cameron Highlands as well as at Serdang. The agricultural stations continued to discharge their function on the lines which they were designed to follow and have proved their value as centres for demonstration, instruction and the supply of planting material.

The herd of cattle at the Stock Farm, Central Experiment Station, Serdang, numbered 74 head at the end of the year. A portion of the milk produced was sold to Government hospitals and the remainder to private consumers in Kuala Lumpur. The section of the farm devoted to pig breeding was reduced during the year owing to the incidence of Kidney Worm disease. The pig pens are under reconstruction and it is hoped to be able to resume normal breeding activities during 1939.

School gardens were maintained in the Federated Malay States during the year; the general standard of work thereon continued to improve and the annual competitions showed a satisfactorily high standard of upkeep.

The School of Agriculture situated at Serdang and supported jointly by the Federated Malay States and the Straits Settlements Governments continued to operate most successfully. At the beginning of 1938 there were 68 boys in the school; 48 left on completion of the school year in April and 42 were newly admitted in May. The 1938/39 session thus commenced with a complement of 62 boys. At the end of the year there were 58 boys in residence. Eight major and six minor scholarships were awarded by the Government of the Federated Malay States.

Since the school first opened in 1931 a total of 223 students and pupils have completed their respective courses of training. Of these, 176 are known to have found salaried employment but the true figure is probably higher as some have failed to keep in touch with the school after leaving. Experimental and instructional work on poultry at the School of Agriculture has been continued and at the end of the year the flock comprised 407 birds. The health of the flock was, on the whole, good. An increasing number of requests for advice on poultry were dealt with during the year.

Much attention has been devoted to the improvement of poultry on small holdings throughout the Federated Malay States. Rhode Island Red cockerels are at present distributed from certain Agricultural Stations to Asiatics, usually for the purpose of crossing with local or Canton hens, although a few exceptionally keen Asiatics have also obtained hens for pure breeding. Experiments, however, suggest that no great improvements can result until better feeding methods are employed and considerable attention has been devoted to finding an economical and satisfactory ration.

The two new laboratory buildings at the headquarters of the Department of Agriculture were nearing completion at the end of 1938.

The Malayan Agri-Horticultural Association held its 15th Malayan Exhibition in Kuala Lumpur in August and a number of District Shows were held as usual during the year.

In Selangor Nipah Distilleries Ltd., which had been engaged in the production of sugar from the nipah palm, ceased operation during the year.

LIVESTOCK.

GENERAL POSITION IN REGARD TO ANIMAL HEALTH.

No serious outbreak of epizootic disease occurred, although in Perak there were outbreaks of clinically mild foot-and-mouth disease amongst cattle in the Kinta district, and a localised outbreak of Swine Fever involving swine at Tanjong Piandang.

Although the country was free from spectacular outbreaks of specific diseases, what may be called sub-clinical disease continues to be prevalent amongst all classes of stock and more particularly amongst the younger animals.

In the production of sub-normality undernutrition, inbreeding, sub-clinical blood infections, internal and external parasitoses, and lack of efficient sanitation all play a part.

The Negri Sembilan Veterinary Department imported seventeen Sind stud bulls from India with a view to invigorating the local inbred stock and increasing the general level of milk production in the dairying areas of the State. In connection with this livestock improvement scheme steps were taken to encourage the adoption of more hygienic measures to improve the sanitary conditions under which milk is produced, and a castration scheme is being arranged with a view to eliminating the more degenerate scrub animals which at present exist in the State.

In Perak a study of the conditions under which swine are bred in the Sitiawan area was undertaken in order to determine the nature of the measures which would be necessary to increase the general health and productivity of the pigs in this important swine breeding centre.

At Kuala Lumpur a scheme was initiated by the Health Officer for the milking of cattle under sanitary supervision at suitable centres; when this scheme is in full operation it will be possible for the officers of the Veterinary Department to exercise much closer and effective supervision over the general health of all milch cattle in the Kuala Lumpur area and to give suitable advice on the measures necessary for the maintenance of milch cattle in a state of maximal health and productivity.

DISEASES OF ANIMALS.

(a) FIELD OPERATIONS.

Trypanosomiasis.—An outbreak of trypanosomiasis amongst dogs was investigated in Perak and steps were taken to ascertain the incidence of this disease amongst the other species of animals on the estate where the diseased dogs had been kept.

Swine Fever.—Epizootic swine fever was discovered at Tanjong Piandang in Perak and effective measures were taken to limit the spread of the infection. Several localised outbreaks of disease amongst swine in other parts of the State were investigated but although the possibility of swine fever was excluded, it was not possible to arrive at any satisfactory diagnosis.

Food-and-mouth Disease.—In the Kinta district of Perak foot-and-mouth disease broke out amongst cattle at Siputeh, the epizootic subsequently spreading to Batu Gajah, Ipoh, Parit, Tronoh and Gopeng. One thousand one hundred and twenty-two cases of the disease were recorded, the death-rate being less than 0.9 per cent.

Piroplasmosis.—Two cases of clinical piroplasmosis in indigenous Zebu cattle were treated in Selangor. The infecting piroplasm was B. bigemina and both animals promptly recovered following treatment with Bayer's Acaprin which is a synthetic urea derivative.

Diphtheritic Stomato-Pharyngitis.—The virus disease referred to in Malaya as diphtheritic stomato-pharyngitis was responsible for heavy mortality in some poultry flocks in Perak, and was also noted in a small flock of pure-bred fowls in Kuala Lumpur.

LABORATORY AND RESEARCH OPERATIONS.

As formerly, and in the absence of a central laboratory, research work was conducted by individual State Veterinary Officers as opportunity occurred.

Piroplasmosis and Anaplasmosis.—In Perak, Selangor and Negri Sembilan investigations were undertaken in connection with certain protozoal blood infections, the work in the former

State being concerned with the premunity said to be enjoyed by the indigenous bovine animals to piroplasmal and anaplasmal diseases, while in Selangor and Negri Sembilan investigations were conducted into the susceptibility of imported Indian animals to the more commonly encountered Malayan protozoal blood infections.

Tuberculosis.—In Selangor, animal inoculation tests were carried out in connection with the typing of a strain of M. tuberculosis recovered from the lung of a piglet, the final conclusion reached being that the infecting organism was of human origin.

Contagious Ecthyma.—In Perak further investigations were conducted into contagious ecthyma of goats with a view to evolving a vaccine which might be suitably employed for prophylactic purposes.

Poisonous Plants.—About a hundred species of plants, poisonous or suspected to be poisonous to cattle, were listed in Perak, these plants belonging to thirty-seven different botanical natural orders.

IMPROVEMENT IN MARKETING OF ANIMALS AND ANIMAL PRODUCTS.

Although duties in connection with the marketing of animals and their products have not been specifically allotted to the Veterinary Department much work is indirectly carried out at the abattoirs which are under veterinary supervision, especially in regard to the hygienic handling of animal flesh. Careful flaying is also encouraged in order to increase the value of hides and skins.

In Selangor where the supply of swine is more than sufficient for the needs of the State the Veterinary Department took steps to start an export trade to Singapore, with the result that small but regular consignments of swine were sent to the Singapore abattoir during the last six months of the year.

In Pahang propaganda was carried out with a view to encouraging Malays to undertake the production of ghee (clarified butter) from buffalo milk, but such production has not yet reached the stage when the product can be marketed.

In Selangor the Veterinary Officer served as a co-opted member on the Sanitary Board committee appointed to draw up a scheme for the provision of milking depôts in the Kuala Lumpur area at which all cattle providing milk for sale to the Kuala Lumpur public will be milked under sanitary supervision.

EDUCATION.

Two Veterinary Inspectors were sent to the Imperial Dairy Institute, Bangalore, for a nine months' course in Animal Husbandry and Dairying.

LEGISLATION.

No important legislation relative to diseases of animals was enacted during the year.

Livestock Census.

A census of livestock collected and compiled by the Veterinary Department during the year shows the following figures :

State.	Oxen.	Buffaloes.	Sheep.	Goats.	Swine.	Horses.
Perak	26,936	17,452	923	50,322	135,184	124
Selangor	18,424	3,202	855	35,413	152,846	72
Negri Sembilan ...	12,411	12,737	2,528	23,501	61,393	3
Pahang	5,652	26,927	5,701	27,529	23,950	61
Total, 1938 ...	63,423	60,318	10,007	136,765	373,373	260
Total, 1937 ...	61,859	57,502	10,189	122,738	328,167	251
Increase, 1938 ...	1,564	2,816	- 182	14,027	45,206	9

Taking the average values of these animals as $50 per head for oxen, $60 for buffalo, $5 for sheep, $6 for goats and $10 for swine the approximate value of this livestock may be estimated as follows :

Oxen	$3,171,150
Buffaloes	3,619.080
Sheep	50,035
Goats	820.590
Swine	3,733.730
Total ...	$11,394,585

In comparison with the census of 1937 there is a general increase in all classes of animals as shewn in the following table :

State.	Oxen.		Buffaloes.		Sheep.		Goats.		Swine.	
	+	-	+	-	+	-	+	-	+	-
Perak	1,647	...	1,162	...	8	...	8,712	...	28,790	
Selangor	...	276	122	...	194	...	3,780	...	2,305	
N. Sembilan ...	433	...	...	529	...	773	...	1,541	7,487	
Pahang	...	240	2,061	...	389	...	3,076	...	6,624	
	2,080	516	3,345	529	591	773	15,568	1,541	45,206	
Variation ...	+ 1,564		+ 2,816		- 182		+ 14,027		+ 45,206	

This variation is valued as an increase in livestock wealth amounting to over $780,000, swine being responsible for over 50 per cent. of this increase.

Considering that the percentage of animals sent to the public abattoirs which have been bred and reared in the Federated Malay States has now risen to over 70 per cent. in the case of oxen, 50 per cent. in the case of buffaloes, 86 per cent. in the case of goats and 97 per cent. in the case of swine it is surprising that regular yearly increases in the numbers of these animals continue to be recorded in the annual census.

No census of poultry has been attempted but as birds are kept and marketed by almost all sections of the community both in the towns and in the country districts, the value of the industry must be considerable.

SLAUGHTER OF ANIMALS IN THE FEDERATED MALAY STATES.

The figures given below are returns from the Sanitary Board slaughter houses and as such are accurate. No attempt, however, has been made to include animals slaughtered privately which no doubt amount to quite a considerable number annually.

—	Oxen.			Buffaloes.			Sheep.		
	Local.	Imported.	Total.	Local.	Imported.	Total.	Local.	Imported.	Total.
Perak ...	3,495	610	4,105	1,013	1,823	2,836	217	774	991
Selangor ..	2,624	1,298	3,922	844	1,145	1,989	88	9,346	9,434
N. Sembilan ...	1,270	738	2,008	933	307	1,240	317	990	1,307
Pahang ...	338	437	775	985	111	1,096	179	...	179
Totals ...	7,727	3,083	10,810	3,775	3,386	7,161	801	11,110	11,911

—	Goats.			Swine.		
	Local.	Imported.	Total.	Local.	Imported.	Total.
Perak ...	11,470	2,521	13,991	158,297	7,550	165,847
Selangor ...	3,277	270	3,547	94,346	...	94,346
N. Sembilan ...	1,384	71	1,455	39,729	1,103	40,832
Pahang ...	2,078	...	2,078	22,544	...	22,544
Totals ...	18,209	2,862	21,071	314,916	8,653	323,569

The following table shews the percentages and values of locally produced and imported animals slaughtered:

Species of animals.	Local.			Imported.			Total.	
	Number.	Percentage.	Value.	Number.	Percentage.	Value.	Number.	Value.
			$			$		$
Oxen ($66 each) ...	7,727	71.48	509,982	3,083	28.52	203,478	10,810	713,460
Buffaloes ($89 each) ...	3,775	52.72	335,975	3,386	47.28	301,354	7,161	637,329
Sheep ($12 each) ...	801	6.73	9,612	11,110	93.27	133,320	11,911	142,932
Goats ($8.50 each) ...	18,209	86.42	154,777	2,862	13.58	24,327	21,071	179,104
Swine ($15 each) ...	314,916	97.33	4,723,740	8,653	2.67	129,795	323,569	4,853,535
Total ...	345,428	92.23	5,734,086	29,094	7.77	792,274	374,522	6,526,360

From these figures it will be seen that of the animals slaughtered those imported represent only 7.77 per cent. of the total.

In order to assess more accurately the amount of meat produced locally and imported respectively, it would perhaps be advisable from the statistical point of view to express the numbers of the different kinds of animals as sheep equivalents. For practical purposes one ox is equivalent in meat value to ten sheep, one buffalo to thirteen sheep, one goat to half a sheep and one pig to three sheep. On this basis the total number of animals produced locally and expressed as sheep equivalents is 1,080,998 while the number of imported animals similarly expressed in terms of sheep equivalents is 113,344. From these figures it will be apparent that over 90 per cent. of the meat killed in the Federated Malay States abattoirs is derived from locally produced animals.

ANIMAL TRAFFIC.

Animals were imported into the Federated Malay States from the Unfederated Malay States, Straits Settlements, Netherlands Indies, India, Australia and Britain, importation from the Netherlands Indies and India being permitted only under special permit.

The following table gives details of the country of origin of the imported animals:

From.	Oxen.	Buffaloes.	Sheep.	Goats.	Swine.	Horses.	Dogs.
1. MALAYAN AREAS OUTSIDE THE F.M.S.							
Singapore	10	...	...	..	...	1	3
Malacca	8	268	...	6	1,103	...	2
Penang	...	...	15	30			
Province Wellesley ...	78	74	...	21	4,658	...	1
Kedah	250	1,869	...	19	2,893		
Perlis	103	239	...	19			
Kelantan	231	817					
Trengganu	377	203					
Total (Malayan) ...	1,057	3,470	15	95	8,654	1	6
2. OUTSIDE MALAYA.							
Netherlands Indies ...	2,010	178	...	2,824			
Australia and New Zealand	1	..	11,172	...	...	...	6
India	14						
United Kingdom ...	...	...	...	...	1	...	8
Granada	...	...	...	...	...	...	2
Total (outside Malaya) ...	2,025	178	11,172	2,824	1	...	16
Grand Total ...	3,082	3,648	11,187	2,919	8,655	1	22

There is practically no export trade in livestock from the Federated Malay States with the exception of small regular consignments of swine sent from Selangor to Singapore, but there is a fair volume of inter-state traffic governed largely by the laws of local supply and demand.

FORESTS.

The area of reserved forests at the end of the year remained practically unchanged at 7,599 square miles, or 27.6 per cent. of the total land area of the Federated Malay States. The formation of a further large forest reserve in Pahang is, however, under consideration. As in the previous year, numerous applications for permits to prospect for tin in forest reserves were received. An area of 45,000 acres has been made available for this purpose in Perak and the position is being carefully reviewed in other States. In parts of the country that are still undeveloped (e.g., eastern Pahang) it may be possible and desirable to permit prospecting before selecting areas for the silvicultural treatment that is necessary to ensure future timber supplies, but in the western States the position is different. Many of the forest reserves are already under intensive management and the rival claims of forestry and mining will have to be weighed most carefully, not only on account of the capital already invested by Government in these forests, but also because many of them are ideally situated for the supply of the timber required by the mines themselves. At the end of the year the area of forest reserves under silvicultural treatment was 84,844 acres, in addition to 16,608 acres in which regeneration is complete.

Four new sawmills were brought into operation, bringing the total for the Federated Malay States up to 38, but two suspended operation during the year. The total outturn of the mills was 63,808 cubic tons of sawn timber, a figure that may be regarded as satisfactory in view of the trade conditions prevailing during the year. The veneering plant of Messrs. Malayan Collieries Ltd. produced 7,500,000 square feet of plywood sheets. The match factories in Perak and Selangor, which use local timbers, turned out 3,521,040 packets of matches.

The only minor forest product that calls for special mention is *jelutong*. Shortage of supplies in 1937 forced the price up to $60 a pikul, at which level it remained at the beginning of the year under review. During the latter part of the year, however, the price gradually fell to $40 a pikul, nevertheless the momentum engendered by the former high price carried production to 1,885 tons (as compared with 1,208 tons in 1937) and no diminution in the rate was apparent until the end of the year, when tapping ceased in a number of the less accessible areas. This is not a matter for regret: however carefully the trees are tapped a certain mortality is inevitable and to maintain the yield at the level of the past year for any length of time would inevitably result in a shortage of trees of tappable size long before the young stock now being tended in regeneration operations is large enough to replace them. The total revenue from minor forest produce amounted to $276,860, *jelutong* alone producing $220,420—a figure far in excess of any previous record.

Outturn figures for major forest produce (with those of the previous year shown in brackets) in thousands of cubic feet were: timber 18,570 (15,045), firewood 8,001 (9,851) and charcoal 3,202 (3,084), representing an equivalent of approximately 29,773,266 (31,971,000) cubic feet of round timber, excluding produce taken free by Malays.

The timber purchase section handled 903,568 (670,425) cubic feet of timber, including 301,673 sleepers for the Railways. The latter figure included 20,382 secondary hardwoods delivered at the Railways' own open-tank impregnation installation at Sentul, which was brought into operation early in the year. The total expenditure on purchases amounted to $889,389 ($605,825) and the net cost of the section was $19,182 ($16,642) or roughly 2.16 per cent. of the value of the timber inspected.

The financial results of the year's working were:

Revenue	$1,611,640	(1,595,244)
Expenditure ...	$901,412	(895,064)
Surplus	$710,228	(700,180)

Investigations at the Forest Research Institute continued to be directed, as far as possible, towards practical, as opposed to fundamental, issues. The strength of the Research staff was increased by the recruitment, locally, of two Malay Technical Assistants.

At the end of the year, owing to the incidence of recruitment, the strength of the department was one over establishment (a position that has since been rectified). The number of gazetted officers was 42, of whom 10 are attached to Federal posts at Headquarters or Research (including 3 specialist officers), 16 are in the Federated Malay States, 2 in the Straits Settlements and 6 in the Unfederated Malay States.

FISHERIES.

Fishing in the Federated Malay States of Perak, Selangor and Negri Sembilan has been good in spite of stormy weather during the latter part of the year. In Pahang an unusually strong and persistent south-east wind from July onwards kept the fishermen on shore a good deal longer than desirable, although fish were not scarce at sea.

The experimental vessel reported fair quantities of fish, and it clearly shows the handicap under which local fishermen must work when dependent on their frail fine weather craft. Exceptional quantities of Terubok (Shad) were landed in Krian, Perak, from October until the end of the year, and they are persisting.

The Kedra (Mullet) fishing, too, was good during its normal seasons of January, February and August to November.

The Chinese drift netters of Selangor and Negri Sembilan did fairly well until the latter part of the year when strong westerly winds kept them off their fishing grounds and reduced their landings.

Supplies to the markets have been well maintained, and it is interesting to record that supplies for Perak and Selangor are now coming from Pahang via the Kuantan and Fraser's Hill Road.

Similarly, supplies from Perak and Malacca are now being received in Kuala Lumpur. Prices are steady and not appreciably higher despite the almost complete boycott of Japanese caught fish in Singapore by Chinese.

The Kembong fisheries of Pangkor, Dindings, are developing steadily and the Chinese dealers are proposing to fit out even larger motor boats than before to enable them to go still further afield.

Nearly 5,500 tons of fish are now landed by this fleet, but its treatment and subsequent disposal are not considered to be satisfactory by the Health authorities. It is at present salted and dried, or cooked and marketed as a cooked product. As a salted product its food value is reduced to a high degree, and as a cooked product it is exposed to the risk of contamination and perhaps decomposition if not sold without delay. The remedies are either to sell the fish in a fresh condition, or to can it. The first remedy implies the provision of adequate refrigeration facilities, and the second a properly equipped canning plant of a modern type.

These are both expensive items, and it is questionable whether anything, but a very small part of the capital required could be found by the dealers and some assistance would, in all probability, be necessary.

The question of setting up a canning station has been under review for some time, but due primarily to the uncertainty and caution of the fish dealers towards such an innovation, progress has been somewhat slow. However, they are keenly interested, and a demonstration plant will be set up to show them the essentials of canning. The value of canning this fish cannot be overstated. Apart from its obvious advantages in time of emergency, it is a valuable addition to the food requirements of the people in normal times. The fish packs well and is an excellent food. The reception which the "samples" received leaves no doubt as to its acceptability, and it is ranked with the best imported products, both in quality and taste.

The experimental vessel "Kembong" has carried out a full programme of work and attention has been turned towards the exploitation of fishing grounds which are, as a rule, only worked by the local Malay fishermen when the weather permits. It is quite clear that if they are to be enabled to disregard the effects of even slightly abnormal weather, they require more substantial craft with which to work. Moreover some of these craft may have to be fitted with power and facilities for carrying their fish on ice, and radical changes are fore-shadowed if the Malays are to hold their own as fishermen.

The establishment of a Fisheries School in Singapore will provide all the instruction they require, and it is satisfactory to record that without any advertising, more applications from the Federated Malay States for training have been received than it is possible to accommodate. This is most encouraging, since they fully realise that no Government appointment will follow as a matter of course, and it seems to indicate a definite desire to improve their lot. It will be soon enough to report on the scheme after it has been in operation for a year.

Fresh Water Fish.—The fresh water fisheries work is held up to a considerable extent by lack of staff, but this will be remedied on the return of the Chinese Officer who is being trained in fresh water work in England.

Routine work is being carried on at Tapah and supplies of carp (Puntius and Osteochilus), Temakang (Helostoma Temmincki) have been sent to stock the lake in Kuala Lumpur to keep down mosquito producing weeds.

Chendroh Dam received a stock of Chow Hu (Ctenopharyngdon) Chinese carp in order to test the possibilities of acclimatising these fish in Malaya, thus reducing our dependence on imported fry from China as is necessary at present. The experimental work at Sungei Manik showed that it was possible to utilize stagnant water for the cultivation of Lampam (Puntius Schwanefeldi) and Terbol (Osteocheilus Hasselti) in addition to Kalui (Osphronemus Olfax) and Temakang (Helostoma Temmincki) by the provision of cheap locally produced foods, such as *keledek* and tapioca leaves, etc., provided they are screened from predatory enemies. Although the cultivation of these fishes has not yet been extended to the *sawas*, it is possible to use the big borrow pits there, and this is a matter which should be provided for without delay.

The trout in Cameron Highlands have grown well. Those fish in the Bertam system seem to rise to a fly better than do those in the Telom system which seem to be very dour, preferring larger prey such as tadpoles and large dragon fly larvae. These fish have grown to a large size, but do not seem inclined to take the fly, and anglers who have tried for them have been disappointed. It is just possible that their skill and knowledge of the river is insufficient, and a better idea will be formed after they have had more experience of the river. Most of them have tried the deep pools instead of the rough shallow water which the rainbow trout prefers and in which he cannot be seen. For this reason these places may be overlooked.

The Temiar watchers are doing well and seem to have settled to their work.

Paths have been made and the river cleared from the Terla-Telom junction to about one-fourth mile below the Kial-Telom junction which make it possible for anglers and sightseers to visit the Telom in comfort.

It has been considered preferable to cut as little timber as possible along the banks, and to leave it as far as possible to anglers to decide themselves what they want out of the way.

The total number of fishermen employed in the Federated Malay States amounted to 14,841 of whom 7,889 were Malays, 6,155 Chinese, 542 Indians and 255 Siamese.

Revenue amounted to $16,551 from all sources against $16,715 collected in 1937.

MANUFACTURES.

Manufacturing concerns are not numerous in the Federated Malay States.

The principal factories are two for the manufacture of matches (in Perak and Selangor), three for the canning of pineapples (in Selangor), four for the production of aerated water (in

Perak, Selangor and Negri Sembilan), one for preparing plywood (in Selangor) and six distilleries (in Perak, Negri Sembilan and Pahang). Of the last named, five manufactured Chinese samsu, and the sixth potable liquor from pineapple juice. There are also a few tile and brick factories and one cement works.

CHAPTER VII.

Commerce.

The aggregate declared value of the trade of the Federated Malay States (imports, exports and re-exports) with countries outside the Federation, as compiled from declarations received in the Central Trade Registry during 1938, amounted to $304,946,236 as compared with the 1937 total of $488,348,502—a decrease of $183,402,266 or nearly 38 per cent.

The declared value of imports decreased by over seven million dollars (nearly 6 per cent.) as compared with 1937. The principal import is rice which forms the staple food of the majority of the population. Imports of petroleum, dredges and dredging materials, cigarettes and piece-goods come second, third, fourth and fifth respectively from the point of view of value. Besides rice, other articles of food which are imported in large quantities are wheat flour, milk, sugar and groundnut oil.

The declared value of exports fell by over 175 million dollars (over 50 per cent.) as compared with 1937. This enormous decrease is almost entirely attributable to drastic reduction in the export quotas for tin and rubber and to the lower prices prevailing for these two commodities, which are by far the most valuable products of the Federation.

During 1938, the price of tin varied from $81.55 to $109.98 per picul and averaged $95.35 per picul, as against an average in 1937 of $119.89 per picul.

The price of rubber varied from 17.8 cents to 27.9 cents with an average of 23.1 cents per pound in 1938 as against an average of 31.5 cents per pound in 1937.

The price of copra (sun-dried) varied from $3.07 to $4.42 per picul and the average price for the year was $3.53 as compared with an average of $6.48 in 1937.

The total value of the imports, exports and re-exports, including bullion and parcel post for the last five years are as follows :

Year.	Imports.	Exports and re-exports.	Favourable trade balance.
	$	$	$
1934	84,731,059	202,725,341	117,994,282
1935	87,102,149	186,770,827	99,668,678
1936	96,796,795	246,945,491	150,148,696
1937	131,101,350	357,247,152	226,145,802
1938	123,380,927	181,565,309	58,184,382

The favourable balance for 1933 ($44,756,785) was, however. lower than that for 1938 ($58,184,382).

The percentage distribution of the imports, exports and re-exports trade of the Federated Malay States for the last five years is as follows :

IMPORTS.

Countries from which imported.	1934.	1935.	1936.	1937.	1938.
Singapore	31.42	30.55	30.79	27.52	23.45
Penang	17.61	19.54	19.43	18.58	16.56
Malacca	2.00	2.20	1.99	1.85	1.69
Unfederated Malay States	2.28	2.34	1.89	2.12	2.46
United Kingdom	12.70	13.65	14.42	18.04	22.44
British Possessions ...	9.36	10.52	9.33	9.56	9.44
Continent of Europe ...	2.54	2.45	2.79	4.27	3.50
Siam	9.45	7.53	8.00	6.28	7.96
Netherland Indies ...	9.93	8.48	8.65	8.31	9.00
Other Foreign Countries...	2.71	2.74	2.71	3.47	3.50
	100.00	100.00	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1934.	1935.	1936.	1937.	1938.
Singapore	23.12	24.18	24.59	23.53	22.46
Penang	28.08	33.13	35.03	35.01	32.37
Malacca	2.54	1.23	1.48	1.50	1.62
Unfederated Malay States	.60	.49	.58	.80	1.46
United Kingdom	16.62	15.46	6.73	7.33	11.63
British Possessions ...	1.14	1.75	2.25	2.17	2.73
United States of America	15.23	14.02	17.95	14.63	11.76
Other Foreign Countries ...	12.67	9.74	11.39	15.03	15.97
	100.00	100.00	100.00	100.00	100.00

PRINCIPAL IMPORTS (1938).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal sources of supply in order of importance.
Rice, all kinds	Tons	245,637	17,524,881	Siam, Burma, Penang. Malacca, Kedah, Perlis, Singapore, British India and Trengganu.
Rice Bran, Flour and Meal...	,,	48,951	1,953.867	Siam, Malacca, Penang, Burma and Singapore.
Wheat Flour	,,	14,138	1,254.825	Australia, Penang, British India, Singapore and Malacca.
Milk, all kinds	Value	—	3,892,430	United Kingdom, Singapore, Penang, Canada and Australia.
Sugar, all kinds...	Tons	41.086	2,998,012	United Kingdom, Hongkong, Penang and Singapore.
Cigarettes	Lbs.	4,119.662	5,515,046	United Kingdom, Singapore and Penang.
Palm Oil	Tons	8.792	1,096,953	Johore.
Cement	,,	61.717	1,193,946	United Kingdom, Penang, Burma, Hongkong and Singapore.
Piece-goods	Yards	24,803.538	4,662,038	Singapore, United Kingdom, Penang, British India and Japan.
Drugs and Medicines... ...	Value	—	1,450.779	Singapore, Penang, United Kingdom, China, U.S.A., Australia and British India.
Petroleum	,,	—	16,577,852	Sumatra, Singapore, Penang, U.S.A., Malacca and United Kingdom.
Motor Cars, Passenger and Commercial	Nos.	631	1,214,856	Penang, Singapore and United Kingdom.
Dredges and Dredging Materials	Value	—	6,243,502	United Kingdom, U.S.A., Penang and Australia.
Kachang or Groundnut Oil...	Cwts.	88,314	1,260,896	Singapore, Hongkong, Penang and British India.

PRINCIPAL EXPORTS (1938).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal countries of destination in order of importance.
Rubber	Tons	171,248	87,100,081	U.S.A., United Kingdom, France, Penang, Singapore, Italy, Germany, Malacca, Canada, Australia, Hongkong, Belgium, Ceylon, Holland, Japan, Argentine Republic, Sweden, Denmark, Poland and South Africa.
Copra	„	92,981	6,176,925	Penang, Germany, United Kingdom, Holland, Singapore, Norway and Egypt.
Tin and Tin-ore	„	54,364	64,787,260	Penang, Singapore and U.S.A.
Scheelite	„	281	933,368	U.S.A. and United Kingdom.
Palm Oil	„	36,563	4,230,683	Singapore, United Kingdom, Canada and British India.
Pineapples, canned	„	8,764	894,343	United Kingdom, Canada, U.S.A. and Holland.
Gold	Value	—	1,676,860	Singapore and Penang.
Rubber Latex	Gallons	1,840,569	2,200,237	Singapore, U.S.A., Johore, United Kingdom and France.

PRINCIPAL IMPORTS (1937).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal sources of supply in order of importance.
Rice, all kinds	Tons	232,294	16,232,117	Siam, Burma, Penang, Malacca, Singapore and British India.
Milk, all kinds	Value	—	3,954,412	United Kingdom, Singapore, Penang, Holland and Australia.
Sugar, all kinds	Tons	38,005	2,802,455	United Kingdom, Hongkong, Penang and Singapore.
Cigarettes	Lbs.	4,406,538	5,559,735	United Kingdom, Singapore and Penang.
Piece-goods	Yards	30,976,562	5,769,555	Singapore, Penang, United Kingdom, British India and Japan.
Drugs and Medicines	Value	—	1,375,807	Singapore, Penang United Kingdom, Australia and China.
Petroleum	„	—	18,771,857	Sumatra, Singapore, Penang and U.S.A.
Motor Cars, Passenger and Commercial	Nos.	1,289	2,288,712	Singapore, United Kingdom and Penang.

PRINCIPAL EXPORTS (1937).

Articles.	Unit of Quantity.	Quantity.	Value. $	Principal countries of destination in order of importance.
Rubber	Tons	247,387	171,258,490	U.S.A., France, Penang, United Kingdom, Singapore, Germany, Italy, Malacca, Canada, Australia, Japan, Ceylon, Belgium, Hongkong, Sweden, China, Mexico, Argentine Republic and Denmark.
Copra	„	88,915	9,530,347	Penang, Germany, United Kingdom, Holland, Singapore and Greece.
Tin and Tin-ore	„	99,755	151,418,742	Penang, Singapore and U.S.A.
Palm Oil	„	29,600	3,938,226	Singapore, Canada, U.S.A., United Kingdom, Egypt, Japan, Penang and South Africa.
Pineapples, canned	„	15,329	1,839,829	United Kingdom, Canada, U.S.A. and Holland.
Gold	Value	—	1,469,401	Singapore and Penang.

IMPORTS OF COIN.

Year.	Copper coin. $	Gold coin. $	Silver coin. $
1934	—	—	—
1935	—	—	4,500
1936	—	—	10,500
1937	330	6,073	19,000
1938	675	9,285	4,000

RE-EXPORTS OF COIN.

Year.	Copper coin. $	Gold coin. $	Silver coin. $
1934	—	—	5,975
1935	16,000	—	40,000
1936	—	—	—
1937	—	—	—
1938	—	—	—

The annual 1938 trade figures show a decline in the value of external trade both inward and outward. Exports of rubber and tin to the United States of America only (Malaya's largest customer of these commodities) fell by no less than $147 millions or 57 per cent. and $79 millions or 60 per cent., respectively. Unsettled conditions throughout Europe and the Sino-Japanese hostilities accounted for decreased trading generally. Malayan imports from Japan were $28 millions less than in 1937, a decrease of 69 per cent. and exports to that country were $7 millions less, a fall of 11 per cent.

The foreign (external) trade of Malaya, representing the Colony of the Straits Settlements, the Federated and the Unfederated Malay States, in merchandise, bullion and specie and parcel post, amounted in value to $1,141 (£133) millions, as compared with $1,603 (£187) millions in 1937, a decrease of 28.8 per cent. Imports decreased by $139 millions or 19.9 per cent. and exports by $323 millions or 35.7 per cent. Decreases in both the import and the export trade were spread over the majority of the principal products, the largest decreases being in the imports of rubber, tin-ore, copra, cotton piece-goods, motor spirit, liquid fuel and motor cars, and in the exports of rubber, tin, copra, sago flour, motor spirit, coconut oil and canned pineapples. There were, however, increases in the imports of rice, dredges and dredging materials and kerosene and also in the exports of rice and kerosene. Exports of rubber decreased by $211,681,000 and those of tin decreased by $93,430,000.

The $1,141 millions of external trade consisted of imports $559 ($698) millions and exports $582 ($905) millions, the figures for 1937 being shown in brackets. The value of bunker coal, oil fuel, aviation spirit, and stores taken on board ships and aircraft on foreign trade routes for their own consumption amounted to $13 ($13) millions and if this is added to the excess of exports there was a favourable trade balance of $36 millions, as compared with a favourable balance on the same basis of $220 millions in 1937.

Of the $1,141 millions, representing the external trade of Malaya, $948 ($1,331) millions or 83 (83) per cent. indicate the direct foreign trade of the Straits Settlements, $150 ($207) millions or 13 (13) per cent. the direct foreign trade of the Federated Malay States and $43 ($65) millions or 4 (4) per cent. that of the Unfederated Malay States.

For the Federated Malay States, the total trade amounted to $305 millions as compared with $488 millions for the previous year, a decrease of $183 millions or 37.5 per cent. as shown in the quarterly returns of the Customs Department. Of the $305 millions, $145 millions or 48 per cent. represented foreign trade, $154 millions or 50 per cent. trade with the Colony, and $6 millions or 2 per cent. trade with the Unfederated Malay States.

CHAPTER VIII.

Labour.

Both skilled and unskilled labour in the Federated Malay States is still largely of foreign descent and the greater part of foreign birth. It comes from China, India and Java. The Javanese labourers in the Federated Malay States are not numerous. Indian labour is principally from the Madras Presidency though a certain number of Northern Indians (popularly called Bengalis) work as artisans and earthworkers. The Chinese labourers come from South China.

The main bulk of labour is distributed as follows:

	South Indians.	Chinese.	Javanese.	Malays.	Others.
(A) Employed on estates ...	137,353	28,925	1,762	2,234	658
(B) Employed on mines ...	5,262	32,586	516	2,616	1,380
(C) Employed in factories ...	1,990	2,691	37	314	108
(D) Employed in Government departments	21,329	4,234	154	2,789	1,348

INDIAN IMMIGRATION AND EMIGRATION.

In 1938, 44,207 persons arrived in Malaya by B. I. steamers as deck passengers as against 122,566 in 1937. Assisted passengers (including minors and infants) totalled 4,580, of whom 776 adults were newcomers. Among those who paid their own passages were about 16,332 labourers, of whom 2,595 adults were newcomers to Malaya. Of those who landed at Port Swettenham, 3,125 were assisted passengers and 6,497 ordinary deck passengers.

The flowback from Malaya to India was 75,479 deck passengers as against 44,486 in 1937. Of these 41,886 adults (accompanied by 2,095 minors and 2,455 infants) paid their own fares, 4,247 adults (accompanied by 290 minors and 225 infants) being labourers proceeding on a short holiday to India.

Repatriates, including minors and infants, totalled 29,043.

The total Indian Federated Malay States population at the end of 1938 was estimated to be about 463,000.

In the second half of 1937 the rate of immigration both assisted and unassisted was slowed down. Until the Government of India stopped assisted emigration from India on the 15th June, 1938, only labourers returning from leave in India and dependants rejoining their families were assisted. The movement of unassisted immigrants continued but on a much smaller scale and it too consisted mainly of persons returning to Malaya after a short holiday in India.

On the average Indians are not so adaptable, self reliant or strong as the Chinese and need greater attention particularly on their arrival in the country. They are quite unfitted for the strenuous work under pioneering conditions of opening up jungle. However, now that the number of Indian labourers settled in Malaya is large, newcomers are found to adapt their habits more rapidly to Malayan conditions and to aim more quickly than in the past at a higher standard of living.

South Indian labourers are assisted to Malaya at the expense of the Indian Immigration Fund which is pan-Malayan in its operation. The basis of this fund is a payment by every employer (including Government departments) on the day's work done by each of his South Indian labourers.

Labourers in India either present themselves at one of the two Malayan depôts in India—Negapatam or Avadi—where they are accepted if fit and possess a document from an employer guaranteeing them work in Malaya, or are recruited by licensed recruiters—kanganies—who are the agents of employers in Malaya. All recruiting is strictly controlled by the Malayan Labour Department and all accepted recruits must pass through one or other of the above-mentioned depôts, if they are to be assisted to Malaya. Recruiting is nowadays comparatively insignificant as a means of obtaining labour from India, though it is still essential in the case of new estates which have not yet built up a connection with villages in India or in the case of labourers who live too far from the depôts to defray railway fares. Non-recruited labourers may not be assisted to the depôts by any person who is not a relative, and they are at liberty on arrival in Malaya to work where they please. Recruited labourers are required to proceed to the employers in Malaya for whom they are recruited, but the only remedy for their disobedience is a civil one.

There is no public fund—such as the Indian Immigration Fund—to assist labourers of other than the South Indian races to emigrate to Malaya, and they pay their own fares. In former times Chinese contractors built up their Chinese labour forces by importing workers from China, the latter repaying the cost by instalments. This, however, is not the rule nowadays.

During 1938, the quota for Chinese immigrants was reduced from 6,000 to 3,000 a month on January 1st, and again to 500 a month in April at which figure it remained until the end of the year. Women ceased to be exempt from restriction from 1st May, when a quota of 500 was instituted. Children under 12 years of age continued to be exempt from restriction.

CONDITIONS OF EMPLOYMENT.

Housing.—The extensive building of new lines and reconstruction of old lines reported for 1937 proceeded without a break during 1938. It is now generally realised that there is ample accommodation for bachelors and married couples and that new buildings and reconstruction should be designed for larger families. Particularly during the second half of the year most houses whether ground-floor or raised have been designed to give each family two living rooms, an enclosed kitchen and store and a verandah. The reconstruction of old lines has aimed at getting the same results. The preference of the Chinese for dwellings of the same sort rather than for the old communal housing is becoming more widespread.

Water Supplies.—The provision of proper supplies is compulsory under the Labour Code and is strictly enforced. Piped water whether from a publicly owned supply or from a private source is being made increasingly available.

Sanitation.—Labour and Health Department officers see that adequate sanitation is provided. Experience has shewn that the more extensive the provision the more use is made of it and that housing areas are kept cleaner. As a result employers are putting in more latrines particularly of the bored-hole type.

Workmen's Compensation.—The officers of the Chinese Protectorate and of the Labour Department try to follow up all reports of accidents and make sure that compensation is paid. The tracing of dependants and the recovery and transmission of money for dependants overseas is usually done by these officers.

Hours of Working.—The legal maximum working day is of 9 hours duration with not more than 6 hours at a stretch. On estates the average day is about 7 hours. A labourer cannot be compelled to work more than 6 days a week.

Assistance to Labourers in need of Relief.—The Indian Immigration Fund maintains a home in Kuala Lumpur to which unemployable and unemployed South Indian labourers are admitted, and it pays for the transport of unemployed to places where work is available. In the case of Chinese labourers, the Chinese Protectorate maintains suitable institutions. Repatriation is given free to deserving cases.

Savings of and Postal Remittances by Labourers.—

(1) Details in respect of Chinese are not available.

(2) South Indian labourers:

(*a*) Deposits in the Post Office Savings Banks	$2,004,244
(*b*) Remittances to India	Rs. 3,322,296
(*c*) Membership of Co-operative Societies	49,383
(*d*) Capital of Co-operative Societies . .	$1,470,348
(*e*) Number of Co-operative Societies ...	267 as against 243 in 1937.

Strikes and Labour Disturbances.—There was only one large-scale labour dispute during the year in the Federated Malay States. This occurred at Hong Fatt Mines, Sungei Besi, and nearly 4,400 labourers were involved. The strike occurred on the 1st July when wages which had already been cut were further reduced without notice but there were also other complaints by the workers against other conditions prevailing on the mine. The Acting Controller of Labour and the Protector of Chinese, Selangor, arranged a settlement guaranteeing labourers a minimum wage. Working conditions were also improved in many ways and a subsistence allowance is in future to be paid on eleven holidays a year. Work was resumed on the 8th July.

GENERAL.

All labour is free and is landed free of debt and the only remedy for breach of agreement is a civil one.

On most estates one or more provision shops are maintained where labourers can purchase their immediate requirements, and the prices are supervised by the management and officers of the Labour Department. The competition of village shops, which labourers can visit quickly on bicycles, keeps prices reasonable in estate shops.

Standards of living among all labourers are improving yearly and the different races live and work together in harmony while they gain from experience of each other.

Rice is produced by indigenous Malays or immigrants of cognate races who have settled in the Peninsula. To the extensive irrigated area of Krian, Indian labourers migrate in harvesting time from neighbouring estates and receive payment in kind.

Market gardening and pig and poultry rearing are almost monopolised by Chinese, though Malays contribute eggs and poultry to the country's supplies, selling their products to Chinese middlemen. A considerable amount of local fruit is produced by Malay ra'ayat.

The Chinese also monopolise the building and skilled artisan trades, though North and South Indians also find employment in them. At bridge and wharf-making and for pile driving, Malabaris (South Indians) are preferred.

Tailoring, dress-making and cobbling are mainly in the hands of Chinese who are now ousting the North Indian from his former monopoly of ladies' dress-making.

Dhobying is shared by Chinese and South Indians.

Domestic servants are usually Chinese (Hainanese) or South Indians, though Malays and Javanese are also employed, particularly as private motor-car drivers.

Chinese are in the great majority in mining, logging, the timber industry, as rickshaw pullers, and in felling and clearing jungle for plantations.

South Indians are in the great majority in Government and Municipal Departments and on European-owned estates.

Dairying is shared by North and South Indians.

In mining South Indians are employed on earth work, but they are being displaced by Sikhs.

Javanese excel as drain cutters on estates.

No labourers are under contract in the Federated Malay States. Most Indians are employed directly, most Chinese are employed through contractors.

The most striking and important change during the past decade has been the growth in the number of Chinese women and children and the resulting tendency to settle down in Malaya. This has made a big change in the mode of life of the Chinese. Instead of living in large houses and taking their food in communal messes they now favour separate dwellings. Newcomers are assisted to emigrate by their friends or relations rather than by contractors or professional recruiting agencies.

The Controller of Labour, Malaya, who is an officer in Class IA of the Malayan Civil Service is responsible for all labour matters affecting every race. On the protective side the Labour Department concerns itself mainly with the enforcement of the Labour Code and various labour Enactments. On the immigration side it is associated with the Indian Immigration Fund from which are financed the housing and feeding of assisted emigrants in the large emigration depôts in India, their passages to Malaya, their quarantine and maintenance in depôts in Malaya, their transport to the various places of employment, their assistance when unemployed, and their repatriation to India when necessary. On the political side, the primary responsibility for negotiations with the Government of India rests with the Controller of Labour who receives reports on every relevant side of Indian life and affairs from his officers stationed in India. In matters affecting the Chinese labourers, the Chinese Protectorate works in collaboration with the Labour Department, the former's officers being invested with the necessary powers under the Labour Code.

The Chinese Labour Advisory Committee met twice. Following the decrease in the permissible export of both tin and rubber the problems connected with Chinese labour changed completely.

CHAPTER IX.

Wages and Cost of Living.

The average weighted index number of commodity prices in Singapore, represented by 17 principal commodities (15 wholesale and 2 retail) decreased by 22.1 per cent. as compared with 1937. Decreases were shown in the prices of 16 articles while the retail price of tea remained unchanged throughout the year. The price of tin was £182 per ton at the beginning and £217 at the end of the year, the highest and lowest prices being £217 and £154, respectively. The price of rubber was $6\frac{7}{8}$ pence per lb. at the beginning and $8\frac{3}{16}$ pence at the end of the year, the highest and lowest being $8\frac{3}{8}$ and $5\frac{5}{16}$ pence, respectively. The following index numbers show changes in commodity values during the last five years (base, 1929 values = 100):

1934.	1935.	1936.	1937.	1938.
63	64	73	86	67

There was a general decrease in the cost of living for all communities and the index numbers for the Asiatic, Eurasian and European standards given below show that costs in respect of all these standards are lower when compared with 1937 but higher when compared with 1914:

Standard.	1914.	1937.	1938.	Percentage increase + or decrease − in 1938 as compared with 1937.
Asiatic	100	112.5	109.2	−2.9
Eurasian	100	112.4	109.6	−2.5
European	100	127.1	125.9	−0.9

Details of average prices, declared trade values, exchange, currency and cost of living may be found in the separate report on this subject (No. S. 4) published annually by the Statistics Department.

Although these figures do not accurately represent the average weighted commodity prices in the Federated Malay States, owing to the greater importance of commodities other than rubber and tin in Singapore as part of its entreport trade, it is an established fact that the trend in Singapore and that in the Federated Malay States follow each other with reasonable closeness. No separate figures for the Federated Malay States are available.

Since 1923 the Indian Immigration Committee has had the power to prescribe standard wages for South Indian labourers, such rates being based on a standard budget including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. In 1930 the following standard rates were fixed:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult able-bodied male.
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult able-bodied male.
37 ,, ,, ,, female.

At the beginning of 1938 the rates of wages paid to Indians in Government Departments and on most estates were not less than 50 cents a day for men and 40 cents for women. On the 1st May, 1938, the rates on estates were reduced to 45 and 35 cents and these wages were maintained during the rest of the year. Many small estates sold their rubber export rights and stopped tapping with the result that their labourers either went elsewhere or applied for and were given passages to India. On the estates with old established labour forces from which labourers usually do not want to return to India the unemployment difficulty was solved by old people and young dependants stopping work and by a reduction in the number of days work offered. Other estates particularly in the south of the Peninsula were glad to employ extra labourers for new planting and the Labour Department was able to find work for good labourers with but little loss of time. The depôts in Kuala Lumpur and Port Swettenham were used to house these labourers while work was being found for them to which they were willing to go. One very good example of this occurred when the Nipah Oil Palm Estate at Kuala Selangor stopped operations. Four hundred labourers and their families were brought to Port Swettenham, medically examined, and lodged, until they went in a short time to estates in the neighbourhood. Most of these labourers were able to find work for themselves.

Chinese labourers on estates are usually paid by results. By the end of the year it was estimated that their earnings were 60-65 cents a day. Chinese on mines fared worse. It is impossible to give a figure of actual earnings because the labourers in most cases made their own arrangements to share a much reduced volume of work amongst themselves.

The price of Rangoon rice, the staple food of Indian labourers, did not change much during the year nor did the standard labourer's budget. The lowest price of Rangoon rice in Kuala Lumpur was 24 cents a gantang in July and the highest 28 cents in November. The highest and lowest budget figures were $6.67 in February and $6.27 in October.

The index numbers of average monthly cost of Chinese foodstuffs which are calculated on the quantities in the diets supplied at St. John's Island Quarantine Station, Singapore, were 100 for 1937 and 100.5 for 1938.

CHAPTER X.

Education.

A.—GENERAL.

The expenditure upon education (including $685,042 spent by the Public Works Department on the building and upkeep of schools) was $4,205,624. Of this sum $521,651 was paid in grants to English aided schools, $111,654 in grants to Indian vernacular schools and $194,632 in grants to Chinese vernacular schools. The total revenue amounted to $464,237 of which the sum of $231,059 represents the proceeds of the education rate, the remainder being derived from school fees and miscellaneous sources. The net expenditure on education was, therefore, $3,741,387. This includes the sum of $50,000 contributed by the Federated Malay States Government to Raffles College.

Education facilities are provided in the Federated Malay States in English, Malay, Chinese and Tamil.

Schools are either Government, aided by Government, or private..

All schools (other than those in which the teaching is of an exclusively religious nature) in which ten or more persons are habitually taught in one or more classes, and all supervisors, committees of management and teachers of schools, must be registered in accordance with the Registration of Schools Enactment.

B.—OUTSTANDING EVENTS IN 1938.

The following were the outstanding events of the year:

The appointment of a Commission consisting of Sir William H. McLean, K.B.E., PH.D., M.INS.C.E. (Chairman) and Professor H. J. Channon, D.SC., with the following terms of reference—

> To survey existing arrangements for higher education, general and professional, in Malaya; and to consider in the light of local needs and conditions whether they require extension and if so, in what directions and by what methods.
>
> To report upon the present work of Raffles College, Singapore, and on any potential development that may seem desirable.

The Commission conducted its investigation during October and November.

The appointment of a representative Committee to investigate the opportunities in Malaya for employment in the engineering profession.

A Report on Vocational Education in Malaya by Mr. H. R. Cheeseman, the Acting Deputy Adviser on Education, Malay States. This officer was deputed to study in Great Britain and the Netherlands Indies the aims and methods of the modern type of school in those countries with a view to bringing our schools into closer touch with present day conditions. One of the recommendations of the report was immediately accepted, namely, to appoint an Organizer of Vocational Schools and Handicrafts for the Straits Settlements and Federated Malay States to be responsible for the Trade Schools and for the development of handicrafts in the English and vernacular schools. This Organizer will be appointed in 1939.

The appointment of a Committee to consider and report upon the courses of study and staff required at the Technical School, Kuala Lumpur. The report will be submitted early in 1939.

With effect from 1st January, 1938, school fees in English schools were reduced in classes up to and including Standard VI. The new fees in those classes are $2.50 a month. This was in accordance with Federal Council Paper No. 31 of 1936.

C.—ENGLISH EDUCATION.

The "English Schools" are those in which English is the medium of instruction. Less than twenty per cent. of the pupils come from English-speaking homes. Children are admitted into the lowest class at the age of six or seven and are given the normal school course which extends over eleven years culminating in the Cambridge School Certificate Examination, though a few remain a year or two longer and enter for the Queen's Scholarship Examination.

The fees in Primary and Elementary Classes up to Standard VI inclusive are $30 (£3 10*s*.) a year for all pupils, girls or boys. Above Standard VI all girls and boys enrolled before 1st January, 1934 (when the higher scale of fees in classes above Standard VI was first intimated) continue to pay the old rates, namely, $48 (£5 12*s*.) a year for boys and $36 (£4 4*s*.) a year for girls. For pupils enrolled after 1st January, 1934, the fees for all girls and boys are fixed at $72 (£8 8*s*.) or $108 (£12 12*s*.) a year according to the results of an examination, the successful pupils up to 50 per cent. of the available places paying the lower and the remaining pupils paying the higher fees. Pupils enrolled after 1st January, 1934, whose progress is normal will reach Standard VII in January, 1942.

There is no compulsory education in English.

In 1938 there were 22 Government English schools for boys and 13 grants-in-aid English schools for boys and 13 for girls. The total average enrolments were 7,011, 5,993 and 5,440 respectively, a total increase of 2,145 on the 1937 figures.

Of the 18,444 pupils in English schools at the end of the year, 2,658 (or 14.41 per cent.) were enjoying free education. Of these free scholars 186 were Europeans or Eurasians, 1,659 Malays, 547 Chinese and 237 Indians while 29 belonged to other races.

The aided English schools are managed by various missionary bodies—two Roman Catholic Orders (the Christian Brothers and the Dames de St. Maur), the Methodist Episcopal Mission, the Church of England and the Plymouth Brethren.

The Government pays to such schools monthly grants equal to the difference between thier revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment, and salaries in respect of European Missionary teachers at the rate of $3,000 (£350) a year for men missionaries and $1,800 (£210) a year for women missionaries. Under certain conditions capital grants amounting to half the cost of approved new buildings are also paid by the Government.

The Malay College, Kuala Kangsar, a secondary school for selected Malays, particularly those of royal blood or good family, is the only entirely residential Government school in the country. It had 141 pupils at the end of the year—50 from Perak, 25 from Selangor, 32 from Negri Sembilan, 17 from Pahang, 5 from Johore, 4 each from Kelantan and Perlis, 2 from Sarawak and 1 each from Brunei and Trengganu. Four boys of the College were appointed Malay Probationers in the Malay Administrative Service in July. They proceeded to Raffles College for a further three years' study, under the new scheme, in August.

Locally recruited teachers in English schools are recruited from Raffles College graduates for middle and secondary departments (from Standard II upwards). Teachers (women only) are trained in Education Department Normal Classes, conducted in large centres; providing a three-year course.

The enrolment for the three private Hill schools for European children (one on Fraser's Hill and two at Cameron Highlands) was 183 (108 girls and 75 boys).

The special developments in the Government and aided schools during 1938 were as follows:

Perak.—The teaching of science was begun in two schools, the Anderson School, Ipoh, and the Anglo-Chinese School, Ipoh. The science laboratory at the latter school forms part of a new wing that includes in addition class-rooms and craft rooms. The new school wing was officially opened by His Highness the Sultan of Perak on 30th June.

Selangor.—A new Methodist Boys' School at Sentul and a new Malay Hostel for the Klang High School were completed and a new swimming pool at Victoria Institution for the use of English schools in Kuala Lumpur was opened.

Negri Sembilan.—An extension to the Malay Hostel attached to King George V School, Seremban, was nearly completed by the end of the year.

Pahang.—A new girls' school (Methodist Girls' School) was opened at Kuantan.

The results in the Cambridge Local Examination taken by pupils in Government and aided schools in December, 1937, were:

	Number of passes		Per cent. of passes	
	1936.	1937.	1936.	1937.
Junior Certificate ...	645	775	70.3	73.1
School Certificate ...	464	482	65.4	69.9

The parallel percentage of passes for all Centres in the British Isles and Overseas was 62 in the Junior Certificate and in the School Certificate the percentage was 67 for all Centres in the British Isles and 64 for all Overseas Centres.

The eighth examination for the Queen's Scholarships since they were revived in 1931 was held in September, 1938. There were 12 candidates for the open scholarship and 3 for the scholarship confined to Malays. The open scholarship was awarded to Yap Pow Meng of the Victoria Institution, Kuala Lumpur, who proposes to study medicine. The other scholarship was awarded to Abubakar bin Tamin of King Edward VIIth School, Taiping, who will read Law and Economics at Cambridge.

D.—VOCATIONAL EDUCATION.

The Technical School, Kuala Lumpur, which provides courses in Civil, Surveying, Mechanical, Electrical and Telecommunication Engineering, continued to serve the whole Peninsula. The 1937/38 session closed in May with 111 students and the new 1938/39 session that opened in July had a record enrolment of 156 students, ten of whom were part-time. All students who completed their training found employment and an increasing number of private students had to be refused admission on account of lack of accommodation. The problem of hostel accommodation received relief by the temporary expedient of making use of the old Rubber Research Institute buildings. There was the usual large number of entries by students of the school and by private candidates for the City and Guilds Examination. A token vote of $20,000 for the new Technical School was included in the 1939 Estimates.

The Trade Schools had large numbers of applications for admission. The Ipoh Trade School had 86 students. Of the twenty boys who completed the three-year course in mechanical engineering fifteen obtained employment. A larger first-year class than usual, namely, 38 boys, was recruited as accommodation was available and there was insistent demand for admission. The Bagan Serai (Perak) Carpentry School had an enrolment of 30. The Kuala Lumpur Trade School had 108 students, of whom 22 were from Negri Sembilan and 9 from Pahang. Of the twenty-four who completed the three-year mechanical course twenty immediately obtained posts. Of the six who completed the three-year tailoring course, one found employment, the other five were employed on contract work at the school where they will remain until they are sufficiently old and experienced to start in trade for themselves; meanwhile they are endeavouring to find the necessary capital. The tailoring section of the Trade School tendered for Government contracts and turned out seventy to eighty uniforms a week: the profits are divided among the boys and credited to them so that when they leave the school they will not be without funds.

Commercial Education.—There were no purely commercial schools and no separate classes for purely commercial work in any of the schools.

Vocational Evening Classes.—Evening classes in English were held as usual at the Maxwell School, Kuala Lumpur, most of the students attending them being boys from the Trade School or the Central Workshops. A class in Prècis-Writing for members of the State Clerical Service was also conducted at Kuala Lumpur.

E.—UNIVERSITY AND COLLEGIATE (POST-SECONDARY) EDUCATION.

The educational institutions providing the most advanced courses in Malaya are the King Edward VII College of Medicine, which is connected with the Education Department through the Adviser on Education who is a member of the College Council, and Raffles College which is under an independent Council, both in Singapore.

The course at the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom so that Licentiates of the College are able to secure admission to the Colonial List of the Medical Register and to be registered as medical practitioners in any part of the British Dominions. There is also a fully organised dental school in which a five years' course of training is given, the diploma in Dental Surgery entitling its holder to practise in Malaya. In addition there is a four years' course for a diploma in Pharmacy, entitling the holder to register under the Registration of Pharmacists Ordinance and to hold a licence under the Poisons and Deleterious Drugs Ordinance, and so enabling him to practise as a dispenser in Malaya.

Raffles College awards diplomas to students who successfully complete three-year courses in art or science. There is also a fourth-year post-graduate course in education.

During the year it was decided to transfer the Queen's Scholarships from the schools to Raffles College and the College of Medicine. There will be Queen's Scholarships and post-graduate Queen's Fellowships open to graduates of Raffles College and the Medical College. This change which had long been urged by Heads of Schools will become operative in 1941.

F.—VERNACULAR EDUCATION.

Malay Vernacular Schools.—There were 492 Malay boys' schools and 78 Malay girls' schools in the Federated Malay States with 57,144 pupils as compared with 563 schools and 54,978 pupils in 1937. Of the total number of pupils 44,240 were boys and 12,904 were girls. The aim of the boys' rural schools is to give a sound primary and practical education to boys who will remain on the land and find occupation in local agriculture. Emphasis is placed on gardening and handwork, on hygiene, physical training and games.

The special developments during the year were:

Perak.—Seven new buildings or annexes providing accommodation for over 800 pupils were completed as replacements of or additions to existing buildings that were in urgent need of replacement or addition. Three of the seven buildings were built under the supervision of the Education Department. In addition, two schools were opened in districts hitherto unprovided with schools.

Selangor.—Three new schools and teachers' quarters, two extensions to existing schools, and various improvements to three schools were completed.

Negri Sembilan.—Eight new schools with teachers' quarters were completed. Two new schools were opened, the kampongs concerned themselves providing both the school building and the teachers' quarters. The new weaving school attached to the Tanjong Ipoh school made a most successful beginning and its sarongs commanded a ready sale.

Pahang.—Two new temporary schools and three sets of teachers' quarters were completed. Extensions were built for four schools. Nine kampongs provided school buildings and for one of these schools the villagers also paid for a teacher.

Teachers for the Malay boys' schools are trained at the Sultan Idris Training College which had, in 1938, 381 students, two Probationary Assistant-Inspectors of Malay Schools and two Probationary Malay Translators. The College provides a three-year training course and in addition has a Craft School and a Translation Bureau. The Craft School continued to pay special attention to pottery, Yuzen printing, genuine Javanese batek, yarn dyeing, weaving and silver work. The Translation Bureau translated 61 documents for various Government departments during the year. Seven school text-books were published or reprinted and eight books were sent to the press. The Physical Training department of the College was re-organised and developed by the Superintendent of Physical Education who was stationed there for most of the year: the College gymnasium was reconditioned and was in regular use; there is now a progressive scheme of training in the various field activities; swimming is included in the course; the recreative side of the social life of the students has been extended by the inclusion of folk, morris and sword dancing.

The cost of the College is borne by the State of Perak in the first instance and is subsequently apportioned between the States of the Federation, the Straits Settlements and the Unfederated States. The amount paid by the Federated Malay States and Straits Settlements respectively is proportionate to the number of students from each while the Unfederated Malay States pay a fixed sum for each pupil.

Teachers for the Malay girls' schools in the Peninsula are trained at the Malay Women Teachers' Training Centre (Malacca) which provides a two-year training course. This Centre now in its third year continued to do good work. Special attention is being paid to hygiene, to handwork and to housecraft. There was the usual regular inspection by the Principal of the work and progress of all ex-students, now on the staffs of schools in different parts of the Peninsula, and satisfactory progress was reported.

Chinese Vernacular Schools.—There were 472 registered Chinese schools in the Federated Malay States as against 456 in 1937, 221 of which with 31,802 pupils (as against 212 with 24,448 pupils in 1937) received grants-in-aid which in 1938 amounted to $194,632, as against $157,845 in 1937. There are two Government Chinese Vernacular Primary Schools, both in Kuala Lumpur.

The grants to Chinese vernacular schools are in three grades for primary schools, $10 a year, $7 a year or $5 a year, and in two grades for secondary schools, $18 a year and $12 a year for each pupil in average attendance. In order to qualify for the highest grade, schools must teach English with reasonable efficiency. In addition to these grants certain schools with Normal Classes receive a special grant of $25 a year in respect of a limited number of pupils in their Normal Classes. This number is determined by the number who may be reasonably expected to be absorbed as teachers in the local schools.

There are three types of Chinese schools:

(i) those managed by properly constituted committees;

(ii) pseudo-public schools, i.e., schools organised by one or more teachers who choose their own "committee members";

(iii) private schools run by a teacher who relies on the school fees for his livelihood, these schools being usually small and old in type.

There are several free schools at which a nominal fee of 50 cents (1*s.* 2*d.*) a month is charged. The fees in other schools are about $2 (4*s.* 8*d.*) a month.

In almost all the private schools the native dialects of the pupils are still used in teaching, but in the other schools Colloquial Mandarin is the almost universal language of instruction. English is taught in many of the large schools and in some of the smaller, though the standard reached is usually low.

There are 17 Chinese schools (nine in Perak, four in Selangor, three in Negri Sembilan and one in Pahang) which extend beyond the primary course and have secondary departments. Fees in Middle schools are paid at the rate of about $3 to $4 a month.

Secondary vernacular education for Chinese girls was provided at one girls' school and six mixed schools in Perak, one girls' school and two mixed schools in Selangor, three mixed schools in Negri Sembilan and at one mixed school in Pahang.

Indian Vernacular Schools.—There were 13 Government, 430 aided and 93 non-aided Tamil schools in the Federated Malay States. The enrolment at the end of 1938 was 22,915 pupils. Grants paid to these schools in 1938 amounted to $111,654 as against $105,878 in 1937. The grant is calculated at the rate of $8 per capita of those in attendance for a full year. In Perak, three of the schools are purely Telugu schools, five are mixed Tamil and Telugu schools and one is a Malayalam school. In Negri Sembilan there are two Oriya schools and three schools teaching Telugu and one teaching Oriya as well as Tamil.

The training class for Tamil teachers, started in Selangor in 1937 with 45 students, completed the two-year course and 21 passed the final examination. A new class with 30 students was started during the year in Kuala Lumpur and another new class with 14 students in Seremban. The training classes have already exercised considerable influence and have led to improvement in teaching methods.

More than 300 schools now have vegetable gardens and practical gardening formed an important part of the curriculum. This new emphasis is likely to have very beneficial results.

The newly appointed Inspector of Indian Schools (formerly known as Inspector of Tamil Schools) returned from study leave in South India on 1st April, 1938. He spent the greater part of the year on a survey of the schools but he was able to effect considerable improvements in teaching method and in school organization.

G.—RECREATION, MUSIC, ART AND DRAMA.

Recreation.—Every encouragement was given to pupils to participate in school games. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket grows more and more popular. Football (Association), hockey, volley ball, basket ball, tennis and badminton are played at most schools. Rugby football is played and gymnastics taught at some of the bigger schools. Swimming received special attention in Kuala Lumpur which is fortunate in having two school swimming pools.

In all English girls' schools, as in boys' schools, there is physical training and games are now regularly played. Some girls' schools play basket ball and have tennis and badminton courts.

Music.—Music is taught in most girls' schools. Singing is taught in the lower classes of all schools. Most schools have gramophones and a few have pianos. Cadet Corps and a few Scout Troops have their own bands.

Handwork and Art.—Handwork is taught under the supervision of trained European Mistresses in the primary and lower classes of English schools. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, clay and plasticine modelling, cardboard modelling, stick-laying, bead-stringing, paper flower making, raffia work and woodwork. All English girls' schools teach needlework; a very high standard is generally attained. There was a notable drive in Perak to introduce advanced handwork in middle classes of the English schools and four schools were fully equipped for the teaching of carpentry. Handicrafts continued to be given special emphasis in all the Malay vernacular schools.

Drama.—Schools generally, both English and vernacular made full use of drama both in teaching and for the entertainment of parents and friends of the schools.

CHAPTER XI.

Communications and Transport.

POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

Posts.—During the year under review postal business of all classes was transacted at 105 post offices by departmental officers and restricted postal facilities were provided at 75 postal agencies by officers of the Customs Department, Railway Station Masters or other persons who acted as agents of the Postal Department. In addition, 162 persons were authorised by licence to sell postage stamps on behalf of the Post Office.

The following changes took place during the year:

(1) Offices opened—

Name.	State.	Status.	Date opened.
Trolak	Perak ...	Post Office	1- 3-38
Pulau Tioman	Pahang ...	Postal Agency	26- 3-38
Changkat Kruing	Perak ...	Postal Agency	1- 4-38
Gunong Semanggol ...	Perak ...	Postal Agency	1- 6-38

(2) Offices closed—

Name.	State.	Status.	Date closed.
Trolak	Perak ...	Postal Agency	1- 3-38
Krian Road	Perak ...	Postal Agency	1- 5-38

At the end of the year there were available for use 330 posting boxes, exclusive of those installed at post offices and postal agencies.

The number of licences issued for the collection of letters for transmission to China under the Clubbed Packet arrangement stood, on the last day of the year, at 270.

As foreshadowed in the previous annual report the extension to Malaya of the Empire Air Mail Scheme came into operation on the 2nd of March. From that date all first-class mail matter, i.e., letters and postcards, between Malaya and the countries participating in the scheme has been exchanged by air as the normal means of transmission. The postage rates were fixed at 8 cents per half ounce for letters and 4 cents each for postcards.

The scheme was further extended to Australia and New Zealand in August and to Hong Kong in September.

The resources of mail carrying organization were severely strained by the heavy Christmas mails and some delay in transit occurred. Having regard to the magnitude of the undertaking, however, the results achieved were, on the whole, not unsatisfactory.

A direct weekly air mail service between Singapore and Saigon by means of the Royal Netherlands Indies Airways (K.N.I.L.M.) came into operation on the 30th August.

The internal air mail service provided by Messrs. Wearne's Air Services, Limited, continued to operate regularly and punctually throughout the year. The service was extended to Alor Star, Kedah, with a twice-weekly frequency on the 2nd April but was discontinued on the 30th April. Ipoh was scheduled as an additional regular port of call on 2nd May but was temporarily abandoned in favour of Sitiawan on the 1st August.

The total weight of air mails carried by this Service in December was 435 pounds as compared with 385 pounds during the corresponding month of 1937.

Money Orders.—Money order business is transacted at all Post Offices and at certain Postal Agencies, and during the year 365,686 money orders to the value of $19,142,430 were issued and paid, representing an increase of 15,589 in number and $1,021,573 in value over the 1937 figures.

Telegraph money orders included in the main 1938 total amounted to 26,198 in number and $3,235,060 in value.

Savings Bank.—The number of depositors in the Federated Malay States Government Savings Bank on the 31st December, 1938, was 99,037 as compared with 91,809 on the 31st December, 1937, representing an increase of 8 per cent. During the year 21,216 new accounts were opened while 13,988 accounts were closed.

The amount standing to the credit of depositors on the 31st December, 1938, was $13,537,048 as compared with $12,098,272 on the 31st December, 1937. The average amount to the credit of each depositor was $137 as compared with an average of $132 per depositor in 1937.

There were 64,707 withdrawals on demand during the year as against 48,377 in 1937 and 596 withdrawals by telegraph as compared with 477 in 1937.

Telegraphs.—The number of postal telegraph offices in the Federated Malay States is 105.

The total number of telegrams sent and received in the course of the year was 458,436 as compared with 457,051 in 1937.

Telegraph revenue collections amounted to $215,766 and showed a decrease of $6,281 on the figures for the previous year. The value of free services rendered by the Department in respect of Government and Aircraft messages increased from $9,664 in 1937 to $11,231 in the year under review.

Teleprinter working was introduced between Taiping and Ipoh on 31st May, 1938, and between Ipoh and Teluk Anson on 21st December, 1938.

Wireless working for the disposal of traffic to and from Trengganu was introduced between Singapore and Kuala Trengganu on the 1st October. Previously the traffic was transmitted by wireless telegraphy between Kuala Lumpur and Kuantan and thence by land line to Kemaman.

Railway Telegraphs and Allied Services.—The Federated Malay States Railway telegraphs, control telephones, block and tablet signalling and other miscellaneous apparatus were satisfactorily maintained throughout the year in accordance with the terms of the Federated Malay States Railway Agreement No. 1754/38.

The Agreement of 1933 between the General Manager, Federated Malay States Railways, and the Director-General, Posts and Telegraphs Department, for the operation of the railway telegraph and telephone services by the Posts and Telegraphs Department was revised and a new agreement was signed on the 7th March, 1938. This Agreement came in force with retrospective effect from the 1st July, 1937.

Work carried out during the year included replacement of decayed wooden poles by rail poles, minor re-alignment of pole routes, alteration to equipment in the Station Hotel, Kuala Lumpur, due to renovations, reconditioning and shifting the Ipoh-Kuala Lumpur and Gemas-Kuala Lumpur train control apparatus boards to the Federated Malay States Railways Offices, Kuala Lumpur, and the provision and shifting of minor items of railway plant and apparatus as requested by the Railway Department.

(i) DEVELOPMENT.

Telephones.—The year has been one of steady progress, the total number of installations at the end of the year being 5,545, a new record, about 7 per cent. above that of 1937.

The nett revenue derived from the operation of the telephone service during 1938 was $1,422,808. This represents an increase of about 7.6 per cent. on the revenue for 1937. 56.8 per cent. of the revenue was due to subscriptions and miscellaneous charges and 43.2 per cent. to trunk fees.

(ii) TYPES OF TELEPHONE EXCHANGES.

The modern trend in technical development of telephone systems is towards the elimination of manual operation by the introduction of automatic apparatus. For the past few years the conversion of small "manual" exchanges to automatic working has been proceeding gradually and, at the present time out of a total of 89 telephone exchanges in the Federated Malay States forty are either automatic or semi-automatic. Ultimately the layout will consist of a number of groups of automatic exchanges, communication within each group being automatic. For external traffic one manual exchange will be required for each group or combination of groups. The first example of this type of layout is the Cameron Highlands Area where two automatic exchanges form the nucleus of what will later develop into a self-contained automatic group remotely controlled from Tapah.

(iii).—NEW EXCHANGES, EXTENSIONS AND CONVERSIONS.

During the year the following new telephone exchanges were opened:

Temerloh (Pahang) full automatic.
Ringlet (Pahang) full automatic.
Tapah Road (Perak) full automatic.

Seven manual exchanges and one semi-automatic exchange were converted to full automatic working. Six other exchanges were extended to provide for increased traffic.

(iv).—TRUNK AND JUNCTION DEVELOPMENT.

Owing to the opening of the new exchanges mentioned above and to general increase in traffic it was necessary to make the following changes in trunk and junction circuits during the year:

Trunk circuits provided	1
Trunk circuits withdrawn	Nil
Junction circuits provided	23
Junction circuits withdrawn	3

(v).—RADIO TELEPHONE SERVICES.

Further improvement in facilities was effected during the year by the extension of hours of service on the most important links (including that to Europe) from 19th April.

Revenue increased very considerably from $13,112 in 1937 to $31,090 in 1938. The Malayan share of this revenue was $10,354.

Reductions of fees for calls during the Christmas season again attracted much additional traffic and the available time was almost fully booked.

(vi).—DEHYDRATING PLANT.

In view of the satisfactory results given by silica gel in lowering the humidity in small automatic units and switchboards, the use of this material was extended to dehydrate larger installations. Two equipments, one at Taiping and the other at Ipoh, were brought into service.

(vii).—OVERHEAD ROUTES.

A considerable amount of reconstruction of junction and subscribers routes was carried out, the more important works being done in Negri Sembilan and Selangor.

Many alterations to overhead routes were necessitated by the road straightening works of the Public Works Department.

(viii).—CABLES.

A submarine cable was laid between the mainland and Pangkor Island.

Modifications and additions to the underground cable systems were made in several localities, those in Kuala Lumpur, Taiping and Kuala Kangsar being the larger works.

Wireless.—The wireless stations in Selangor, Pahang and Perak continued to operate efficiently.

The number of telegraph messages handled by wireless was 27,828 compared with 58,140. The reduction was due to the opening of a wireless service between Trengganu and Singapore, deviating traffic which was handled by the Kuala Lumpur and Kuantan wireless stations formerly.

Aeronautical wireless services continued to expand and during the year 4,197 hours were expended on these services.

The Malayan Amateur Radio Society ceased broadcasting on the 30th November, 1938, due to lack of financial support. This society has broadcast since November, 1929, from the Wireless Station at Petaling Hill using a short wave transmitter loaned and operated by the Posts and Telegraphs Department.

The number of Broadcasting Listening Station Licences in force continued to increase and at the end of the year numbered 5,061 compared with 3,850 at the end of 1937. This represents an increase of 31.5 per cent.

The number of licensed wireless dealers at the end of the year was 247 compared with 54 in 1937.

Provision for a new receiving station in Kuala Lumpur has been made to meet the increasing demands of the wireless services. A site near Cochrane Road has been selected and work is proceeding on the preparation of the site and building.

A new telephony transmitter has been placed on order for use at the Kuala Lumpur Station to cope with the increasing radio telephone traffic and to provide a standby to cover interruptions to the service due to breakdowns of the present transmitter.

A new site for the transmitting station at Kuantan has been obtained and work on the building has already commenced.

Financial.—The nett revenue collected during 1938 by the Posts and Telegraphs Department in the Federated Malay States was $3,434,628. This is a decrease of $338 as compared with the corresponding figure in 1937.

Annually recurrent charges, including Personal Emoluments, amounted to $2,967,638 as against $2,478,588 in the previous year, an increase of $489,050. In addition the expenditure on Children's Allowance amounted to $24,391, and Special Expenditure $5,329,080 as against $16,507 and $383,912 respectively in 1937. The Special Expenditure figures include $4,257,086 being contribution to Federated Malay States Posts and Telegraphs Renewals Fund, specially created in 1938, and $540,738 for writing off the value of unallocated stores hitherto held under Stores and Workshop Suspense Accounts.

The expenditure figures do not include the value of services rendered free of charge by the Posts and Telegraphs Department.

Railways.

The Railways of Malaya, which are such a vital factor in the communications of this country, are owned by the Federated Malay States Government, except for the portion in Johore which is held on lease from that State.

Starting in the south at Singapore, and crossing the Straits of Johore to the mainland on a causeway which also carries a road, the line continues through the State of Johore passing through large areas of jungle alternating with pineapple, rubber and oil-palm plantations until at the 137th mile from Singapore it enters the Federated Malay States territory at Gemas in the State of Negri Sembilan.

From Gemas one line runs north through a very interesting country of wonderful forests, fast flowing rivers and great mountains until eventually it reaches Tumpat, a port on the China Sea in the Unfederated State of Kelantan. A small branch line breaks off at Pasir Mas and runs to Sungei Golok on the Siamese border which is connected by rail via Haad Yai with Bangkok, the capital of Siam.

The main line from Singapore to Penang runs west and north from Gemas, leaving the well-known historical town of Malacca on its left and onwards through Seremban to Kuala Lumpur, the Federal Capital. From this point various lines radiate, the main one to the north passing through Ipoh, the surrounding district of which is the richest tin-bearing area in the world, and then on through Taiping to Prai, the port opposite Penang Island. A few miles south of Prai another line deviates to the Siamese border, passing through the Unfederated States of Kedah and Perlis. At the border station Padang Besar, connection is made with the Royal State Railways of Siam, and it is over this line that the express trains run from Prai (for Penang) to Bangkok.

Journeys are made as comfortable as in any other part of the world by the provision of restaurant cars, modern buffet cars incorporating the latest ideas in seating accommodation, air-conditioned first class coaches and well-appointed sleeping saloons.

By various branch lines the main line is connected to ports on the west coast of the country, the chief of which is Port Swettenham, in the State of Selangor, where ocean steamers can come alongside the well-equipped wharves.

In common with many railways throughout the world the Federated Malay States Railways have been faced with intense competition from road traffic and have built up a system of road distribution from all important stations, in addition to which they have connected up many outlying districts to the railway by means of regular road transport. Services by motor cars to and from the hill stations in Malaya are operated by the railway in conjunction with their train services.

Below are given certain statistics regarding the Federated Malay States Railways and the traffic handled:

MILEAGES, MAIN LINES AND BRANCHES.

Singapore-Prai	488
Gemas-Tumpat	328
Pasir Mas-Sungei Golok	13
Tampin-Malacca	21
Seremban-Port Dickson	25
Sungei Besi-Sultan Street	8
Sultan Street-Ampang	6
Kuala Lumpur-Port Swettenham	27
Kuala Lumpur-Batu Caves	8
Kuang-Batang Berjuntai	14
Tapah Road-Teluk Anson	18
Ipoh-Tronoh	15
Taiping-Port Weld	8
Bukit Mertajam-Padang Besar	99

LENGTH OF LINE (FIRST TRACK).

In the Federated Malay States	614
In the Straits Settlements	98
In the Unfederated Malay States	356
	1,068

	1938.		1937.		1936.
Length of line (first track) miles	1,068	...	1,068	...	1,068
Gauge	Metre	...	Metre	...	Metre
No. of permanent stations	215	...	214	...	213
No. of flag stations	87	...	83	...	80

	1938. $		1937. $		1936. $
Expenditure on Capital Account on 31st December	228,782,053	...	227,600,693	...	227,379,154
From Loan Funds	50,038,727	...	50,038,653	...	50,036,123
From Revenue Advances ...	115,360,243	...	114,178,957	...	113,936,593
From Railway Revenue ...	63,383,083	...	63,383,083	...	63,406,438
Gross Receipts	14,685,567	...	16,812,650	...	13,086,733
Expenditure chargeable to Revenue Account (excluding Renewals Fund Contribution)	12,482,870	...	11,811,458	...	10,312,376
Contribution to Renewals Fund ...	2,086,216	...	2,086,506	...	1,927,045
Expenditure on Capital Account ...	1,210,785	...	248,025	...	220,363
Expenditure from Renewals Fund	2,465,427	...	1,185,195	...	771,179
Balance of Renewals Fund on 31st December	17,028,928	...	16,233,249	...	11,676,571
Receipts from passenger train traffic	5,177,397	...	5,611,870	...	4,423,840
No. of passengers (exclusive of season tickets)	9,185,428	...	8,827,898	...	6,877,055
No. of season tickets	13,433	...	13,503	...	12,106
Receipts from goods train traffic	7,050,855	...	8,432,671	...	6,470,430
Tons conveyed :					
(*a*) Revenue earning	1,856,948	...	2,146,708	...	1,666,631
(*b*) Departmental	265,609	...	255,229	...	236,608
Receipts from road motor collection and delivery services	228,612	...	247,036	...	190,077
Receipts from miscellaneous services (rents, docks, ferries, etc.) ...	2,228,703	...	2,521,073	...	2,002,386
No. of ocean steamers dealt with at Port Swettenham	999	...	1,094	...	1,027

ROADS.

The road system of the Federated Malay States comprises a total of 4,826 miles, of which 3,067 miles are metalled and gravelled. Of the metalled roads, 2,283 miles or 80 per cent. are bituminously treated. On the maintenance of this system $2,822,282 was spent or $860 per mile excluding bridle-paths.

Comparative figures are:

1928	...	$1,483 per mile of metalled and gravelled road
1934	...	566 ,, ,, ,,
1935	...	691 ,, ,, ,,
1936	...	715 ,, ,, ,,
1937	...	833 ,, ,, ,,

The 1934 cost at least was below the minimum required satisfactorily to maintain the roads, and for some years to come it will be necessary to face increased expenditure in order to make good the arrears of maintenance of the "slump" period. A figure of $800 a mile approximates to normal expenditure for present standards.

During the year owing to a cut in the tin quota and consequent closing down of many mines, unemployment amongst Chinese mining coolies became acute and the various State Governments provided funds to initiate a programme of relief works. In this way 11,685 coolies were absorbed and a total of $692,188 was spent on such works which principally took the form of earthwork for widening and improving the alignment where necessary of the roads.

The standard of all the roads is very high for a tropical Protectorate and improvements in alignment and gradient which make for increased driving comfort are constantly in progress. The replacement of timber bridges by structures of concrete and steel goes on steadily from year to year. Surveys are in hand for further extensions to the system, especially in areas still undeveloped probably on account of lack of communications.

SHIPPING.

The number and tonnage of merchant vessels, including native craft, entered and cleared at Port Swettenham during the last three years were as follows:

	No. of vessels.	Tons.
1936	2,961 ...	6,944,778
1937	7,169 ...	7,307,234
1938	6,750 ...	6,666,812

The number and tonnage of ocean-going steamers entered and cleared at this port were as follows:

	No. of vessels.	Tons.
1936	2,053 ...	6,481,844
1937	2,186 ...	6,809,896
1938	1,999 ...	6,201,896

The decrease in the tonnage of shipping at this port is chiefly attributed to the troubled conditions in the East, the depression in trade, and the restricted expert of the principal commodities of the Federated Malay States.

The number of ocean-going steamers which came alongside the No. 6 Wharf was 410, against 447 during the year 1937, a decrease of 37 steamers.

The largest vessel entering the port was the British s.s. "Philoctetes" of 11,431 tons.

The vessel with the deepest draught was the British s.s. "Achilles" drawing F. 30′-7″ A 30′-9″.

The following table shows the nationality, number and tonnage of ocean-going merchant vessels entered and cleared at Port Swettenham during 1938:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American	4	14,773	5	18,223	9	32,996
British	946	2,401,878	946	2,399,774	1,892	4,801,652
Danish	45	172,491	45	172,491	90	344,982
Dutch	138	308,265	137	308,018	275	616,283
German	48	210,783	48	210,783	96	421,566
Italian	1	3,061	1	3,061	2	6,122
Norwegian	127	150,729	128	151,490	255	302,219
Panamanian	24	28,266	24	28,266	48	56,532
Siamese	6	3,819	6	3,819	12	7,638
Total ...	1,339	3,294,065	1,340	3,295,925	2,679	6,589,990

The dredging of the harbour by the dredger "Kuantan" was commenced by the latter part of the year and is being continued.

A number of Southampton Flying Boats of the Royal Air Force visited the port during the year.

The total number of prosecutions taken in the Marine Court was 33 as compared with 20 in 1937. The majority of the prosecutions were for offences committed under the Ports Enactment.

AIR SERVICES.

PERAK.

Ipoh Aerodrome.—This aerodrome was opened to all types of aircraft in September, 1938, and was in regular use by club, private service and commercial machines. Apart from instructional and local flights of the Perak Flying Club a total of 255 landings were made by visiting aircraft. The grass surface was maintained in good order but nine potholes occurred during the year.

As an unemployment relief work, extensions to the landing area were put in hand which, when completed, will afford two runways 1,000 yards in length. Good progress was made on the formation and on the drains which encircle the new area. The cost of maintenance during the year was $4,753.

Taiping Aerodrome.—This aerodrome was maintained in good order during the year and is fit for use by all types of aircraft. Two hundred and fifty-seven landings comprising one hundred and twenty-six service, one hundred and twenty-five flying club, one commercial and five private were made during the year. A sum of $4,823 was spent on maintenance during the year.

Sitiawan Aerodrome.—This aerodrome was maintained efficiently during the year, a total sum of $4,133 being expended on maintenance. A total number of 435 landings were made by service, club, private and commercial machines. Sitiawan is at present a regular port of call on the Penang-Singapore route of Messrs. Wearne's Air Services, Limited.

Tapah Landing Ground.—The question of providing a suitable landing ground in the Tapah district was investigated during the year. Three or four sites are under consideration at present.

SELANGOR.

Kuala Lumpur Aerodrome.—This ground has been satisfactorily maintained and gave no trouble throughout the year, a landing strip of 800 × 185 yards being available for all types of aircraft. Cost of maintenance was $3,500. A new office and cooly lines were constructed and towards the end of the year full control of the aerodrome was taken over by the Public Works Department from the Kuala Lumpur Flying Club.

Special equipment, including flares, fire extinguishers and red lamps were purchased at a cost of $800.

A condemned motor lorry was reconditioned by the Government Factory for use as an ambulance.

All scheduled Commercial Services have been maintained during the year.

Port Swettenham.—After some delays due to weather, the surfacing of the NW-SE runway was completed by April and later in the year loading tests were carried out. These are now under consideration.

Kerling.—A suitable area at Kerling had been chosen in 1937, and, after expenditure of $1,800, a landing strip 710 yards by 77 yards was constructed. Despite this small expenditure the ground was in a very promising condition by the end of the year.

NEGRI SEMBILAN.

There are no proper aerodromes in the State, but air craft in cases of grave emergency might make use of the following areas:

Seremban—

(i) The Race Course situated near the 3½ mile post on the Seremban-Kuala Pilah road.

(ii) The padang in Bukit Nanas Estate situated near the 2nd mile on the Seremban-Port Dickson road.

Bahau—

(iii) The padang in Bahau Estate, Kuala Pilah district.

The owners of the above properties have given permission for the inclusion of these areas in the Air Pilot of Malaya as "Emergency Landing Grounds".

PAHANG.

The Kuantan River provides excellent alighting and take-off facilities for flying-boats of the largest types. Permanent moorings for flying-boats and sea-planes have been established in the river and these are used by the flying-boats of the Royal Air Force whenever they visit.

CHAPTER XII.

Public Works.

The Public Works Establishment consists of the Adviser, Public Works, who is Director, Public Works, Straits Settlements, and has headquarters in Singapore, four State Engineers, eleven Senior Executive Engineers and thirty-four Executive and Assistant Engineers with a subordinate staff of Technical Assistants and Overseers, the former of whom are recruited through a system of apprenticeship, which includes three years study at the Government Technical School, Kuala Lumpur.

The authorized provision for Public Works and Personal Emoluments was $16,304,896, of which $12,904,546 was spent under the heads shown below:

—	1938.		1937.	
	Provision.	Expenditure.	Provision.	Expenditure.
	$	$	$	$
Annually Recurrent ...	4,382,543	4,279,975	4,058,899	3,980,425
Other Charges and Personal Emoluments ...	1,486,298	1,362,250	1,304,661	1,235,137
Special Services ...	9,791,640	6,834,871	5,520,755	3,956,103
Loan and Revenue Account	644,415	427,450	607,418	489,920

In addition to the above a sum of $978,540 was spent on works carried out for other departments making a total spent of $13,883,086. The expenditure was 85.2 per cent. of the provision and the cost of administration was 9.5 per cent. of the total amount spent.

The comparative percentages of expenditure to authorized provision for the last three years were:

	1938.	1937.	1936.
(*a*) Annually Recurrent ...	97.8 ...	98.07 ...	97.87
(*b*) Other Charges	91.7 ...	94.75 ...	94.33
		(Including P.E.)	
(*c*) Special Services ...	69.8 ...	71.65 ...	66.15
(*d*) Loan and Revenue a/c	66.3 ...	80.75 ...	71.15

There are 15,254 buildings of a total value of $88,436,099 to be maintained and the expenditure on maintenance was $1,203,060 or 1.36 per cent. of the capital value. Corresponding figures for 1937 and 1936 were 1.35 and 1.16 respectively. Arrears from the depression period have not yet been eliminated although they have been reduced considerably. The policy of adopting permanent types of construction, wherever possible, is being continued and it is expected thereby ultimately to reduce maintenance costs.

Of a total provision of $9,791,640 for Special Services, $6,834,871 or 69.8 per cent. was expended. No building scheme of major importance was initiated during the year. The new market for the Kuala Lumpur Sanitary Board was completed at a total cost of $333,000.

The building programme included a considerable number of items of minor importance and good progress was made with the provision of additional barracks and quarters at the Police Depôt, Kuala Lumpur, and additional wards at the General Hospital, Kuala Lumpur.

In Perak the principal item completed was the Cowan Street Police Barracks in Ipoh and the shortage of subordinate quarters was reduced by the completion of 53 new quarters at a cost of $136,000.

In Pahang work has started on the scheme for the removal of Police Headquarters, Kuala Lipis, to a new site. The total cost of the scheme is $202,000.

Water supplies were efficiently maintained during the year and regular analyses of samples showed satisfactory results. Shortage of water was experienced during the dry season at Kuala Kubu Bharu, Sungei Buloh, Kepong, Rawang, and Serdang in Selangor, at Pasir Panjang in Negri Sembilan, and at Raub, Bentong, and Kuantan in Pahang. Investigations for augmenting or improving most of these supplies are in hand. There are 52 water supplies in the Federation and full statistics are available in 48 of these. The capital value of these 48 supplies is $18,061,084. During the year 7,765 million gallons were supplied, the nett revenue collected being $879,338 or 4.88 per cent. of the capital cost.

New supplies at Selama, Parit, Enggor and Kampong Gajah in Perak were brought into operation during the year and filtration plants were overhauled or extended in the case of several existing installations.

The policy of metering supplies is continued and is being extended as this has been found to be the most effective method of checking waste.

About $60,000 was spent in Perak, Selangor and Negri Sembilan on the installation of water-borne sanitation in Government quarters and offices. The system of disposal is by bacteriolytic tank and sub-surface irrigation, percolating filters being used where conditions demand them.

A sum of $170,000 was spent on Anti-Malarial Special Services. This included new drainage schemes at Kuala Kubu Bharu, Kuala Lumpur, Seremban, Port Dickson, Kuala Pilah and Temerloh.

Drainage and Irrigation.

The Drainage and Irrigation Establishment consists of the Adviser, Drainage and Irrigation, who is Director, Drainage and Irrigation, Straits Settlements, and has headquarters in Kuala Lumpur, an Assistant Adviser, two Senior Drainage and Irrigation Engineers, 20 Drainage and Irrigation and Assistant Drainage and Irrigation Engineers duty posts with a subordinate staff of 37 Technical Assistants and 13 Irrigation Inspectors serving in the Federated Malay States. This does not include the staff seconded to the Unfederated States, which comprises a Drainage and Irrigation Engineer and an Assistant Drainage and Irrigation Engineer in the State of Johore and a Senior Drainage and Irrigation Engineer for the States of Kelantan and Trengganu.

Krian Irrigation.—The harvest for the 1937-38 season was not favourable. The wet weather in March and April held up operations in the late planted areas. The total planted area was 48,363 acres and the yield averaged 306 gantangs per acre as compared with the maximum yield for the whole area of 393 gantangs per acre in 1934.

The crop prospects for the 1938-39 season appear to be brighter than those of the previous season. The acreage planted is 49,154 an increase of 800 acres over the 1937-38 season.

The Krian Irrigation Extension Scheme which was completed in 1937 at a cost of $376,495 of which half was paid by the Colony Government in respect of the trans-Krian area at Sungei Acheh, made available for padi cultivation new areas to the total of 3,383 acres in Perak. Of this total, 2,424 acres were alienated during the year mostly in the coastal areas of Tanjong Piandang and Titi Serong.

Sungei Manik Irrigation Scheme.—Irrigation is now available for approximately 10,000 acres. Alienation in the First and Second Stages is now 98 per cent. complete, 7,955 acres having been alienated of which nearly 6,000 acres were planted during the year. In the Third Stage Area of 1,500 acres, some 500 acres have recently been occupied and there appear to be good prospects of the whole of this area being occupied in the coming year.

During the year, working drawings were completed for the construction of the new headworks on the Batang Padang River to supply the whole of the area including the extension area totalling 24,000 acres in all, and a contract amounting to $142,534 was let before the close of the year.

Four miles of the perimeter bund in the first extension area of 9,000 acres and 1¼ miles of main canal from the new headworks were completed. There are now in the irrigation area 18.6 miles of irrigation canals, 53 miles of distributors, 30 miles of main drains and 20 miles of bund to be maintained. The maintenance costs for the year were $13,495.

Further surveys were carried out throughout the year to determine the location of branch canal No. 6 in the extension area.

Pumping Schemes, Perak Riverine Areas, Bota-Lambor Areas.—The 1937-38 harvest yielded an average of 370 gantangs per acre from 2,000 planted acres and the operating cost was $3.43 per acre. The area planted in the 1938-39 season is 2,140 acres. Owing to a crack in the crankshaft of the pumping unit and which could not be replaced locally, irrigation during the 1938-39 season could not be given until September.

Bukit Tunggal Areas.—The 1937-38 crop was harvested in February and March and averaged 400 gantangs per acre in the mukim of Pulau Tiga and 200 gantangs per acre in the mukim of Kampong Gajah. The area planted in the 1938-39 season is 1,807 acres, an increase of 127 acres over the previous season. 5.6 miles of additional drains were constructed during the year which will render a further 600 acres available for padi cultivation of which applications for 150 acres have already been received. In spite of alterations by the makers, the pumping plant is still unsatisfactory on account of excessive vibration and further stiffening of the pontoon was carried out to keep the plant going this season until more permanent work can be done in dry dock. The cost of the irrigation supply amounted to $8,234 equal to $4.55 per acre.

Batu Kurau.—The construction of an irrigation dam on the Sungei Pulau, a tributary of the Sungei Kurau, was commenced during the year as part of a comprehensive scheme for the irrigation of some 3,570 acres in the Kurau catchment. The work will not only improve existing cultivation, which has been steadily deteriorating owing to the difficulty of water control, and bring in all available potential padi land, but will prevent the deterioration of the streams, due to the temporary dams constructed by the cultivators, which is causing silting in the reservoir of the Krian Irrigation supply.

Permanent dams with movable balanced gates were constructed during the year as follows:

Two on the Dendang, three miles below Bruas to irrigate 580 acres of existing padi land at a cost of $22,000.

On the Chepias in Lubok Merbau mukim, Kuala Kangsar district to irrigate 365 acres of existing padi land at a cost of $9,500.

On a stream at the 18¾ mile Siputeh-Parit Road to replace an old dam which had been destroyed by floods, for the supply of an area of 260 acres of padi at a cost of $6,000.

Work was commenced on the construction of a permanent dam and intake on the Sungei Jelai, Batu Kurau district, for the irrigation of 400 acres of existing and potential padi land at a cost of $8,568.

Bagan Datoh Delta Drainage Area.—The Bagan Datoh Delta Drainage Area was maintained satisfactorily during the year. The acreage of the area is 48,025 consisting of 46,303 acres of alienated land and 1,722 acres of reserve and State land.

Maintenance charges were $39,918, a decrease of $2,388 from the previous year's expenditure. To the maintenance charges should be added administration charges for engineering and clerical staff making the total charges for the year $51,170. The drainage rate collected amounted to $60,118.

Further reconstruction and repairs of the coastal bund were carried out by dragline excavator between Sungei Tiang and Sungei Batang and between Parit 9 and Parit 26 and two new tidal outlet gates were constructed, one on the Sungei Batang and one at Tanah Lallang on the Perak River at a total cost of $33,812.

Controlled Drainage Scheme, Panchang Bedina Padi Area.—Situated in the Sabak Bernam district, this controlled drainage scheme comprises some 15,000 acres of padi lands of which 12,421 acres had been alienated by the end of the year. The area is dependent on the rainfall within the area for its water supply which is conserved by controlled drainage works comprising some 61 miles of main and subsidiary drains and 27 control gates.

The rainfall for the 1937-38 season was inadequate and the area planted amounted to 7,690 acres. The crop harvested was 2,114,000 gantangs or 373 gantangs per acre of which approximately 1,055,000 gantangs were exported, the cash value being about $89,000. About 3,000 piculs of Sepat Siam fish were sold at a cash value of $26,000. It is disappointing to record that the drought has continued for the 1938-39 season and it has been found necessary in consequence to replant many of the nurseries. The area planted is estimated at close on 8,000 acres.

Beranang Padi Area.—This area of old established sawah in the district of Ulu Langat has been steadily going out of cultivation owing to the deterioration of the river caused by mining and agricultural silt from the uplands. In 1936, a scheme to rectify the river and irrigate some 640 acres was completed at a cost of $18,586. The whole of this area is now planted and good crops are obtained. A scheme to irrigate a further 405 acres in this valley is under investigation.

Kalong Tengah Padi Area.—A new dam has been built at Kalong Tengah to irrigate an area of 220 acres immediately below the village of Ulu Yam Bahru in the district of Ulu Selangor at a cost of $4,366.

Bunding of Coastal Areas.—The Sabak Bernam Peninsula Drainage Scheme which comprises some 21 miles of bund, 30 miles of main drainage channel and 5 tidal control gates, contains some 25,000 acres of small holdings which are mainly under coconuts. The scheme was completed early in the year at a capital cost of $180,000 or $7 per acre. Conditions within the bunded area continue to improve and the people in the kampong are realising the value of the scheme and have cleared out several of their old drains and dug new ones. During the year, about 500 acres of abandoned land have been cleared and replanted. The quantity and size of the nuts harvested have improved enormously.

In order to protect the existing kampong belt of the coastal area between Sungei Sekindi and Sungei Tengi and as a preliminary to the future development of the inland belt for padi, the construction of a substantial bund along the coast with the necessary tidal control gates, has been undertaken. The work comprises the construction of 28 miles of bund, 11 control gates and 36 miles of kampong drains and at the end of the year, 13 miles of bund had been constructed of which 4 miles were done during the year. One gate only remains to be constructed. The expenditure to the end of 1938 is $206,032.

Since 1935, a programme for the improvement of agriculture and health by bunding and main drainage of seven areas totalling 10,900 acres of small holdings along the coast between Klang and Kuala Selangor at a cost of approximately $247,000 has been in progress and was completed early in the year, with the exception of Pulau Lumut area. The Agricultural Officer, Klang, reports that the coconut palms in the areas protected from sea water began to show noticeable improvement about six months after the completion of the bunds. Palms which were barren shew improvement in leaf colour and are producing flower spathes. Both nut size and the yield of nuts per acre have improved. Extra funds have been provided to improve the secondary drainage of these bunded areas as a health measure for the prevention of malaria.

Ujong Permatang Drainage Scheme.—Work commenced on this scheme in August, 1937, and during 1938 two water-gates were completed and two mechanical excavators were employed on the construction of the bunds and drains within the area. The estimated cost of the works is $175,000 and the expenditure to date is $74,693, of which $54,509 was spent in 1938.

Banting Drainage.—The scheme comprises the construction of a tidal control gate and the canalisation and regrading of the two outlets and the construction of a number of new drains at an estimated cost of $50,000 for the improvement of the drainage of 6,254 acres of estates and small holdings. Work started in August and expenditure during the year amounted to $9,200.

Teluk Panglima Garang.—During the year the drainage of 3,400 acres for small holdings in Kuala Langat district has been completed at a cost of $38,000 equivalent to $11 per acre. Half the area is already occupied, the remainder being still in jungle.

There are some 34,000 acres under padi cultivation in Negri Sembilan comprised of numerous relatively small areas, the largest being in the valley of the Muar River below Kuala Pilah town. Here a dam with eight movable gates has been constructed and serves *tali ayer* on both banks of the valley, the *tali ayer* on the left bank being 5¾ miles long, and the other 5½ miles. The new service replaces the numerous channels of the Malay cultivators which were supplied by over 50 brushwood dams. This year the scheme has operated for the first time throughout the season over the whole of the 1,400 acres much of which had previously gone out of cultivation owing to the deterioration of the river. 1,040 acres have been planted and the cultivators have shewn considerable enthusiasm, making their own field channels, which, in some places, owing to the unevenness of the ground, necessitated the construction of embanked channels as much as three feet above ground-level.

Since the department was formed, some 7,000 acres have been brought under irrigation in the State, and there are now 30 schemes in operation. During the year new irrigation schemes were constructed at Penajis (240 acres), Kuala Nuri (250 acres), Kampong Daching (350 acres), and work was in progress on Kombok (100 acres) and Kampong Peraku (288 acres).

In Pahang there are some 32,000 acres of land under wet padi cultivation. Until the department was formed in 1932, there were only two permanent irrigation schemes in the State both in the district of Raub: the Sungei Dong scheme which irrigates an area of about 500 acres and has been working successfully since 1914, and an irrigation scheme at Batu Talam which had become largely derelict.

There are now 47 irrigation schemes in operation in the State covering an area of over 15,475 acres.

Paya Besar Padi Area.—The largest scheme is the Paya Besar padi area where controlled drainage and irrigation works have been under construction since 1933 for an area of 3,000 acres. The area is bunded in blocks according to contour, and during the year an additional 250 acres were bunded and connected with the irrigation supply. The area planted this year is 658 acres, which is 70 acres more than the previous year. The new kampong area, Kampong Permatang Badak, which has been provided with paths and drains has shown steady development and some 187 acres are now settled with padi cultivators.

Pahang Tua Pumping Scheme.—The construction of the Pahang Tua pumping scheme for an area of 3,000 acres in Pekan district was commenced this year. The construction of the main canal and distributors has been carried out departmentally by the people, as many as 400 being employed at certain periods. The pumping plant arrived from England in October and was assembled and tested on the Semantan River at Mentakab; it has since been towed down the Pahang River to the pumping site at Pahang Tua.

During the year small irrigation schemes have been constructed at Kampong Bahru (275 acres), Paya Lallang (122 acres), and Paya Som (95 acres) in Lipis district; Paya Bahru (600 acres) in Temerloh district; Kampong Bedu (227 acres) in Raub district. Extensions have been made to the irrigation works at Aur Gading area (60 acres) in Lipis district, Ulu Atok (495 acres) in Raub district, Kampong Lebu (74 acres) in Bentong district; 14 new areas were investigated bringing the total of areas comprehensively surveyed to 91.

CHAPTER XIII.

Justice and Police.

CONSTITUTION OF THE COURTS.

The Courts of the Federated Malay States are constituted under the Courts Enactment (Cap. 2) and are as follows:

(*a*) The Supreme Court comprising the Court of Appeal and the Court of a Judge;
(*b*) Courts of a Magistrate of the First Class;
(*c*) Courts of a Magistrate of the Second Class;
(*d*) Courts of a Kathi and Courts of an Assistant Kathi;
(*e*) Courts of a Penghulu.

The Supreme Court is a Court of Record and generally, in original jurisdiction, has the same jurisdiction and authority as is exercised in England by the Chancery and King's Bench Divisions of the High Court of Justice. The establishment consists of a Chief Justice, one Appeal Judge and three Judges, but the Chief Justice and Judges of the Supreme Court of the Colony and the Judge of the Supreme Court of Johore are ex-officio Judges of the Supreme Court of the Federated Malay States and vice versa. The Chief Justice and Judges are appointed by the High Commissioner, who may also appoint any fit and proper person to act temporarily as Chief Justice or as a Judge, and may terminate any such appointment.

Magistrates are appointed by the Resident by name or office. The posts of First Magistrate, Kuala Lumpur, and of First Magistrate, Ipoh, are filled by officers of the Colonial Legal Service. All other appointments are made from members of the Malayan Civil and Malay Administrative Services, and all District Officers and some Assistant District Officers are Magistrates of the First Class ex-officio. The powers of Magistrates are defined by the Courts Enactment, the Procedure Codes and other miscellaneous Enactments. Generally every member of the Civil and Administrative Services referred to is required to pass an examination in law before performing the duties of a Magistrate.

The Courts of Kathis and Assistant Kathis deal with matters of Muhammadan religion and law and the powers of the presiding officer are regulated by the terms of his letter of appointment.

An appeal against the decision of a Kathi or Assistant Kathi lies to the State Council and not to any Court.

The Courts of Penghulus deal with petty civil suits between Asiatics and with such other matters as a penghulu is authorised to deal with by law or by the terms of his appointment. An appeal against the decision of a penghulu lies to the Court of a Magistrate of the First Class.

In addition to the above the Inspectors of Mines hold a Court constituted under the Mining Enactment (Cap. 147) for the decision of disputes arising in connection with mining matters and the Controller of Labour has a jurisdiction under the Labour Code (Cap. 154) in disputes as to wages where labourers of Chinese nationality are concerned. Appeals lie direct to the Supreme Court.

POLICE.

In each of the four States of Perak, Selangor, Negri Sembilan and Pahang, the police contingent is in charge of a Chief Police Officer, an officer of the rank of Senior Superintendent in Perak and Selangor, and Superintendent in Negri Sembilan and Pahang, who, subject to the general direction of the Inspector-General of Police, Federated Malay States, is responsible to the British Resident for the efficiency of his contingent. A fifth contingent exists in the Depôt at Kuala Lumpur under the Commandant, an officer of the rank of Superintendent, who is responsible to the Inspector-General of Police, for the enrolment and training of recruits and for the efficiency of the main reserve.

In addition there is, also in Kuala Lumpur, the Headquarters staff made up of the staff of the Inspector-General of Police, the Criminal Intelligence Branch which co-ordinates criminal and political information in the Federated Malay States, and the Criminal Registry or Fingerprint Bureau which serves not only the Federated Malay States but also the Straits Settlements and Unfederated Malay States of Johore, Kedah, Trengganu and Kelantan, besides corresponding with India, Hong Kong, Netherlands Indies, Siam and Indo-China.

The Federated Malay States Police cadre provides thirteen British Officers for service on deputation in the Unfederated Malay States.

The total approved strength of the Police Force was 4,390 on 31st December, 1938, comprised as follows:

British Officers	92
Malay and other Asiatic officers ...	64
Malay Rank and File	2,602
Northern Indian Rank and File ...	1,403
Detectives (of various nationalities) ...	229

In addition there is a force of Veterinary Police of 61 Malays and Indians who, for disciplinary purposes and reasons of economy, are housed in Police barracks and is paid from Police votes though under the direction of the Veterinary Department.

In all, 211 Malays were enrolled during the year compared with an average of 256; height averaged 5′ 4″, chest measurement 34″ and age 20. Seventy-eight came from Negri Sembilan and sixty-one from Selangor.

There was no shortage of Indian candidates for enrolment. One hundred and sixty-nine men were enrolled of whom 117 were Sikhs, 36 Pathans and 16 Punjabi Mohamedans. Their height averaged 5′ 10″ and chest measurement 36″ and age 21 years.

Offences of all kinds reported at Police stations during the year totalled 88,000 compared with 99,639 in 1937. Of this total 9,630 were reports of seizable offences as against 7,148 the previous year. At the close of the year 2,516 convictions had been recorded in respect of seizable offences.

Under the category of serious crime, the offences of murder, gang-robbery and robbery are classified together. In 1938 offences under these headings totalled 142, 88 more than the previous year. There were eleven gang-robberies and sixty-nine robberies during the year. One murder was committed in the course of gang-robbery and seven murders in the course of robbery.

The reports of housebreaking showed an increase and totalled 1,319 compared with 992 in 1937 whilst theft increased from 3,711 in 1937 to 5,337 in 1938. The total of thefts included 1,476 reports of thefts of bicycles, a type of offence that caused the Police considerable trouble.

Non-seizable offences decreased in 1938 from 92,491 to 78,370. The police prosecuted in 51,379 cases.

There was no organised gaming on a large scale. Action was taken in several instances against officials of clubs who permitted habitual gaming in their premises and admitted non-members thereto.

Sixteen firearms were recovered by the Police during the year. Of these, three were identified as having been lost.

In spite of unemployment there were no serious labour disturbances; this freedom from trouble was, to a great extent, due to the promptness with which the State Governments instituted relief works to absorb unemployed. Over 15,000 Chinese coolies were so employed on relief works throughout the Federation and the situation was considerably eased thereby.

However, unemployment, especially in mining districts, was undoubtedly responsible for a considerable increase in seizable crime and the average monthly number of reports needing investigation under the Criminal Procedure Code rose sharply in several districts notably Kuala Lumpur, where a number of serious thefts from Europeans' houses occurred at the end of the year.

The boycott of Japanese goods was intensified throughout the year and more than one instance occurred where business rivalry prompted allegations against entirely neutral undertakings that they were Japanese-owned or employed Japanese personnel or goods.

For the first time in eight years there was, in 1938, a considerable increase in the total reports of serious crime; from the peak year of 1930 when there were 358 reports, the figure decreased steadily to 54 in 1937, but in 1938 the total reached 142. Of this total, 69 reports were robberies of which a large proportion were petty or even only technically classified as such.

There was no evidence of any organised gang of robbers operating, though, in the last month of the year, there did occur in Kampar district several cases which appeared to be the work of a band of experienced criminals.

The outstanding crime of the year was committed in a remote place in Pahang, when a well-planned attack by armed men resulted in the murder of Mr. F. G. W. Dunsford and the theft of his stock of gold ore.

By the end of the year the Federated Malay States Police proper had assumed all the watch and ward and escort duties of the Railway Police; the force of Railway Police detectives worked directly under the control of the Director, Criminal Intelligence.

The suppression of brothels and of trafficking in women is undertaken by the Police. In all, there were fourteen prosecutions in Court in pursuance of this duty; the traffic was well in check.

The issue of passports was performed by the Police. Six hundred and fifty-nine new passports were issued during the year, 426 were renewed, 370 endorsements were made and 240 visas granted.

During the year inquiry by means of fingerprint slips was made at the Criminal Registry regarding 26,079 persons charged with offences and identity was established in 6,190 instances. There were 11,575 new records filed whilst 4,764 were deleted, these latter comprise mostly the records of persons lost sight of for 20 years subsequent to the expiration of their last sentences.

One hundred and sixteen persons were banished from the Federated Malay States during the year.

PRISONS.

Description.—Of the six prisons in the Federated Malay States, the one at Taiping is primarily a convict prison. The others at Batu Gajah, Kuala Lumpur, Seremban, Kuala Lipis and Kuantan are local prisons.

Prisoners are also detained for short periods in lock-up cells at certain police stations.

Vagrants are confined in special vagrant wards.

Population.—The total daily average population of all the prisons which in 1937 was 852.78 decreased to 847.34 in 1938.

At the beginning of 1938 there were 688 prisoners remaining and 6,016 were admitted during the year. On the 31st December, 1938, there were 983 prisoners remaining in all the prisons after 5,716 discharges, one death and four executions.

Health.—The health of the prisoners was good.

Juvenile Offenders.—Juvenile offenders are sent to the Reformatory at Singapore as there is no special institution for their reception in the Federated Malay States. This Reformatory is administered by the Education Department.

There is no probation system.

CHAPTER XIV.

Legislation.

During 1938 thirty-three Federal Enactments were passed. Most of these effected to existing Enactments amendments which experience had shown to be desirable. The more important of the Enactments passed during the year are the following:

No. 1.—The Courts (Amendment) Enactment. This provides that the Court of Appeal in criminal matters shall consist of an odd number of Judges and that normally only one judgment be pronounced. In this respect the practice is brought into accord with that existing in England and the Colony. The Enactment also repeals the provisions of the Principal Enactment which gave to a public officer special facilities for qualification and enrolment as an advocate and solicitor.

No. 2.—The Children (Amendment) Enactment. This Enactment prohibits children under the age of sixteen being employed in connection with any public entertainment. The Controller of Labour is made an additional registering officer under the Principal Enactment in order that he may protect Indian children.

No. 5.—The Wills Enactment. This Enactment introduces for the first time comprehensive legislation to provide for the construction of Wills. The Enactment has been based, with the necessary modifications, on the corresponding legislation of the Colony.

It does not apply to Muhammadans.

No. 9.—The Sale of Food and Drugs (Amendment) Enactment. This Enactment aims at securing uniformity in legislation of this type between the Colony and the Federated Malay States.

It gives power to make rules for the controlling by licence or registration, premises used for or persons engaged in the manufacture, preparation for sale and the sale of any food or drug, and for fixing the fees for such licence or registration.

Power is also given to control by licence or otherwise the importation or sale of skimmed or filled milk.

The provisions of the Principal Enactment have been extended to cover cosmetics and toilet preparations. This has been found to be desirable in view of the fact that compounds of lead injurious to health have been found in such articles.

No. 14.—The Pawnbrokers (Amendment) Enactment. This Enactment adds a new section to the Principal Enactment.

A thief or receiver who has pawned a stolen article is frequently found with the pawn ticket in his possession but often the charge of stealing or receiving cannot be brought home owing to the inability or unwillingness of the pawnbroker to identify the pawner.

The new section 18A allows the Court to make the reasonable presumption that the person possessing a pawn-ticket pawned the goods referred to in it, but also gives to such person the opportunity to displace that reasonable presumption by affirmative evidence to the contrary.

No. 15.—The Women and Girls Protection (Amendment) Enactment. This Enactment brings the provisions of the Principal Enactment (Cap. 156 of the Revised Edition) into line with similar legislation in the Colony.

It makes it an offence to bring into the Federated Malay States for any purpose, any woman or girl by fraud and brings within the scope of the prohibitory provision of the Principal Enactment a female who lives on the earnings of a prostitute other than herself.

Power is also given to detain a child under 12 years of age who has been abandoned by its parents.

No. 23.—The Prevention of Corruption Enactment. This Enactment aims at the prevention of bribery and secret commissions in public or private businesses.

No. 24.—The Affirmations (Amendment) Enactment. This Enactment is designed to preclude the possibility of hardship which might arise under the Principal Enactment in the case where a person is summarily imprisoned on the order of a Magistrate and the sentence is not subsequently confirmed by the Court of a Judge.

A provision has also been incorporated in the Enactment to prescribe that before a sentence is summarily passed for perjury the person against whom perjury is alleged must be given the opportunity of being heard.

No. 25.—The Courts (Amendment No. 2) Enactment. This Enactment gives to the Public Prosecutor in the Federated Malay States the power to require that particular criminal appeals from Magistrates shall be heard by the Court of Appeal.

It also provides for the re-hearing by the Court of Appeal of criminal appeals originally heard by the Court of a Judge but this further appeal is only to be available in cases where such appeal is desirable in the public interest.

No. 27.—The Lighting Control Enactment. This Enactment enables the High Commissioner to make regulations providing for the total or partial cessation of lighting and to bring into force any such regulations in the Federated Malay States or any part thereof on an occasion of emergency or public danger.

It also empowers the Residents to bring such regulations into force for the purpose of experiment or practice as well as in emergency.

Provision is also made relieving from liability any person for any damage or injury caused by him whilst acting in compliance with the regulations provided that all reasonable precautions were taken to avoid causing such damage or injury.

No. 28.—The Rubber Regulation (Amendment No. 3) Enactment. The main purpose of this Enactment is to implement the terms of the International Rubber Regulation Agreement 1938 particularly in respect of replanting and new planting.

State Legislation.—The Prisons Enactment in each State was amended to provide for the commitment of all female prisoners to the prison at Kuala Lumpur, which is the only prison in the Federated Malay States that possesses suitable accommodation and facilities for them.

In Selangor an Enactment to provide for a form of control over dealers in copra which was found to be desirable in order to protect producers against certain malpractices was also passed.

CHAPTER XV.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

- Chartered Bank of India, Australia and China—six branches.
- Hong Kong and Shanghai Banking Corporation—two branches.
- The Mercantile Bank of India Limited—four branches.

There are no agricultural or co-operative banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Commissioners of Currency, Malaya, together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under the Weights and Measures Enactment (Cap. 67) the standard weights and measures are:

(i) The Imperial standard pound.
(ii) ,, ,, yard.
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns ... ... = 1 chi
10 chi ... ... = 1 tahil ($1\frac{1}{3}$ oz.)
16 tahils ... ... = 1 kati
100 katies ... ... = 1 pikul ($133\frac{1}{3}$ lbs.)
40 pikuls ... ... = 1 koyan

CHAPTER XVI.

Public Finance and Taxation.

Budget for 1938.—The Estimates of Revenue and Expenditure for the year 1938 provided for a revenue of $71,367,130 (excluding Railway Revenue) and an expenditure (excluding expenditure on Loan Accounts and Railway Expenditure) of $69,653,888.

Actual Revenue.—The actual revenue for the year was $63,053,114. It failed to reach the estimate by $8,314,016. The principal items of revenue which were overestimated were:

Export Duty on Tin	$5,877,315
,, Rubber	3,446,517
Import duty on Spirits	92,776
,, Textiles	364,212
Fees, etc.	150,704
Electric Light and Power	118,657
Posts and Telegraphs and Telephones	158,738
Total ...	$10,208,919

The principal items of revenue which exceeded the estimate were:

Import Duty on Petroleum	$119,232
,, Tobacco	153,570
Excise—Sale of Chandu	42,210
Forests	185,880
Licences—Traction Engines and Motor Cars	157,632
Municipal	147,969
Water	170,438
Interest	504,980
Miscellaneous	106,199
Land Sales	556,940
Total	$2,145,050

Actual Expenditure.—The actual expenditure of the year was $101,584,059, which exceeded the estimate by $31,930,171. The year's expenditure included the following large items for which no provision was made in the Estimates:

(i)	Contribution to the Special Reserve Fund	$25,000,000
(ii)	Contribution to the Electrical Department F.M.S. Renewals Fund	5,301,116
(iii)	Contribution to the Posts and Telegraphs F.M.S. Renewals Fund	4,623,879
(iv)	Writing off of the Posts and Telegraphs' Unallocated Stores to Expenditure	540,738
(v)	Writing off of the Public Works Department's Unallocated Stores to Expenditure	258,416
(vi)	Writing off of the Electrical Department's Unallocated Stores to Expenditure	672,091
(vii)	Writing off of the Punjab Regiment's Unallocated Stores to Expenditure	123,115
(viii)	Malayan Establishment Office	337,363
(ix)	Miscellaneous Services (Unprovided)	(*a*) 440,638
(x)	Purchase of Lands	188,258

(*a*) includes Non-Pensionable Children's allowance of $359,930 but excludes the $25 million contribution to Special Reserve Fund.

Expenditure on certain services fell below the Estimates, the principal being:

(i) Pensions, etc.		$ 240,333
(ii) Drainage and Irrigation, Special Services		319,815
(iii) Education		201,021
(iv) Electrical	(a)	1,027,946
(v) Medical		176,411
(vi) Military	(c)	125,707
(vii) Municipal		170,652
(viii) Police		127,951
(ix) Posts and Telegraphs Department ...	(b)	213,782
(x) Printing		255,463
(xi) Public Works Department	(d)	179,328
(xii) Public Works, Special Services		2,036,774

(a) Excludes Renewals Fund Contribution of $5,301,116 and writing off of unallocated stores of $672,091 which were not provided for in the Estimates.

(b) Excludes Renewals Fund Contribution of $4,623,879 and writing off of unallocated stores of $540,738 which were not provided for in the Estimates.

(c) Excludes writing off of unallocated stores of $123,115.

(d) Excludes writing off of unallocated stores of $258,416.

Public Works, Special Services, for the year 1938 (excluding $258,416.35 unallocated stores charged off to expenditure) totalled $10,509,611.80 accounted for as under:

(a) Provision in 1938 Estimates		$ 9,498,765.00
(b) Additions during 1938		1,010,846.80
		$10,509,611.80
(c) Spent in 1938 ...	$7,461,990.59	
(d) Re-voted in 1939 Estimates	1,779,527.85	
(e) Lapses	1,069,115.58	
(f) Balance to be re-voted in 1939	198,977.78	
		$10,509,611.80

NOTE.—(c) Out of the total expenditure of $7,461,990.59 a sum of $704,910.02 representing relief works was spent in connection with unemployed labourers for the four States:

Perak	$346,240.62
Selangor	175,570.34
Negri Sembilan	127,378.24
Pahang	55,720.82
	$704,910.02

(*e*) The reasons for lapses were, in the majority of cases, savings on various completed items and in certain cases entry of similar provision in the 1939 Estimates.

In the case of Ipoh Re-building Scheme the lapse was due to shortage of staff and relief works for unemployed labourers and in the case of two other items (one in Selangor and one in Pahang) work had been deferred.

(*f*) The reasons for unforeseen re-votes are:

(i) Supplementary provision granted late in the year.
(ii) Delay in delivery of materials by Crown Agents.
(iii) Bad weather.
(iv) Delay in approval of design due to alterations.
(v) Delay in starting work due to land acquisition.
(vi) To meet retention money due in 1938 and to complete the ancillary works.

Electrical Expenditure for the year 1938 (excluding Renewals Fund Contribution of $5,301,116 and charging off to expenditure of unallocated stores of $672,091.25) totalled $3,998,966.18 accounted for as under:

(*a*) Provision in 1938 Estimates	$3,820,474.00
(*b*) Additions during 1938	178,492.18
	$3,998,966.18

(*c*) Spent in 1938		$2,792,528.46	
(*d*) Re-voted in 1939 Estimates		859,921.15	
(*e*) Lapses—Personal Emoluments ...	$57,286.44		
O.C.A.R. ...	186,929.89		
O.C.S.E. ...	52,131.27		
		296,347.60	
(*f*) Balance to be re-voted in 1939		50,168.97	
			$3,998,966.18

NOTE.—(*e*) Under O.C.A.R., expenditure in respect of Maintenance of Electric Supply (Selangor) Fuel, Oil and Coal, fall short of the Estimates by $103,248 due to the lower demand of electric power in the State.

Revenue Expenditure Deficit.—The revenue expenditure deficit for the year not including the extraordinary expenditure specified below was $2,978,960 as against an estimated surplus of $1,713,242. The deficit on gross expenditure was $38,530,945.

EXTRAORDINARY EXPENDITURE.

Contribution to Special Reserve Fund ...	$25,000,000.00
Arrears up to end of 1937 of Electrical Department's Renewals Fund contribution	4,544,581.92
Arrears up to end of 1937 of Posts and Telegraphs Renewals Fund contribution ...	4,413,041.95
Posts and Telegraphs Unallocated Stores written off to expenditure	540,737.85
Public Works Department Unallocated Stores written off to expenditure	258,416.35
Electrical Unallocated Stores written off to expenditure	672,091.25
Punjab Regiment Unallocated Stores written off to expenditure	123,115.45
	$35,551,984.77

Public Debt.—The total amount of public debt on 31st December, 1938, was the same as on 31st December, 1937, being:

1931—4½ per cent. Federated Malay States Local Loan 1959—Issued at 98 in May, 1931	$16,000,000
1935—3 per cent. Federated Malay States Sterling Loan 1960-70—Issued at par in June, 1935	34,285,715
1936—3 per cent. Federated Malay States Local Loan 1956-66—Issued at par in July, 1936	15,000,000
Total ...	$65,285,715

The Sinking Funds Contributions in respect of the above three loans amounted to $4,229,758 on 31st December, 1938, as follows:

4½ per cent. Local Loan	$ 848,696
3 per cent. Sterling Loan	1,183,551
3 per cent. Local Loan	298,557
Supplementary	1,898,954

C.—CROPS GROWN EXCLUSIVELY BY ASIATICS.

Rice.—The area planted with rice in the Federated Malay States during the season 1935-36 amounted to approximately 178,020 acres of which 174,250 was under "wet" rice and 3,770 under "dry" rice. It is grown exclusively by Asiatics on small-holdings of an average size of 2½ acres each. It has been estimated that a holding of this size will, under Malayan conditions, yield sufficient rice to support a family of six people and will leave some surplus available for sale.

The crop is cultivated both on coastal alluvial lands and also in the bottoms of shallow valleys which are the characteristic features of the inland regions in many parts of Malaya. This gives rise to two alternative types of rice fields. On the one hand there are continuous stretches of rice such as are seen in the coastal areas of Krian and on the other hand a series of separate areas of varying size in the valleys.

Padi cultivation has existed in Malaya since very early times and there is no question that, where suitable soil conditions exist, Malaya possesses rice lands which compare favourably with those of any other part of the world. It is a striking fact that despite the much higher pecuniary returns that have at times been offered by other crops, especially during the years of high prices for rubber and coconuts, padi cultivation has persisted. There is little doubt that this persistence has been materially facilitated by the belief which exists in the minds of the Malays that if a country produces a substantial part of its own food supply, it is much less likely to be affected by fluctuations in the price of export staples. The truth of this view was demonstrated during the years of acute financial depression when in those areas where rice production predominated, distress was far less acute than where peasants depended for their existence on the production of crops for sale and export.

The encouragement of rice cultivation had for long been sympathetically regarded by the Malayan Government, but in 1930 the need for more active steps to encourage the local production of rice received a measure of attention and a committee was appointed to make recommendations for the extension and improvement of the rice industry. As a result various measures have been undertaken, including particularly the establishment of a separate Irrigation Department, the provision of funds for the construction of works for the improvement of water control in padi fields, the extended provision of scientific services for the investigation and improvement of padi cultivation and for the instruction of the raiat.

Contrary to the custom which prevails in many rice producing countries, the cultivation of one rice crop per annum is standard practice throughout the Malay Peninsula, as opposed to the cultivation of two or more crops per annum which obtains in parts of India, China and the Netherlands Indies. Experimental work on the possibility of growing two rice crops per annum in Malaya indicates that it is doubtful whether this practice would lead to increased returns proportionate to the extra labour and expense involved.

Practically everywhere in Malaya the transplanting system of cultivation is practised, the grains being sown in seed beds and the plants transplanted into the fields when they are about six weeks old. The methods employed in raising seedlings vary in different parts of Malaya according to conditions; in some places dry nurseries are sown, in others wet nurseries are used. The preparation of land for planting is performed either by ploughs or by hand cultivation. In the former case buffaloes are extensively used, while in the latter the implements employed comprise the short-handled hoe, locally known as the *changkol*, and the *tajak*, a heavy scythe-like implement with a short broad blade. *Tajak* cultivation is the simplest form employed. Transplanting is carried out by means of an implement known locally as "kuku kambing" (Lit. "goat's hoof") while the padi is reaped either by the sickle or by the hand-knife known as the *Tuai* or *Pisau Menuai*.

The area planted with rice in the Federated Malay States in the season 1935-36 and the total yields are shown below:

State.	Wet.		Dry.		Total.	
	Acres.	Gantangs.	Acres.	Gantangs.	Acres.	Gantangs.
Perak	90,670	29,215,000	2,290	291,000	92,960	29,506,000
Selangor ...	18,380	4,503,000	460	70,000	18,840	4,573,000
Negri Sembilan...	33,850	10,414,000	40	4,000	33,890	10,418,000
Pahang	31,350	7,275,000	980	183,000	32,330	7,458,000
Total ...	174,250	51,407,000	3,770	584,000	178,020	51,955,000

Equivalent in tons of rice = 74,221.

The total area planted was 1,270 acres more than in 1935 but the total crop harvested was 1,031,000 gantangs or 1,473 tons less than in the previous year.

During the season 1935-36 the reduction in the total crop obtained from wet padi, notwithstanding an increased planted area, was the result of much reduced yields in all the States owing to inclement weather. In the inland region the year 1935 was characterised by unusually dry weather in June and July and very wet weather in the second half of August, followed by an unusually dry September and heavy rain in October. The check to growth in September was undoubtedly one of the factors responsible for lower yields in Krian. Floods in the last quarter of the year destroyed practically the whole crop in the riverine areas of Perak. In the Panchang Bedena area of Selangor the August rain destroyed many young plants in the nurseries and necessitated re-sowing. In Temerloh and Lipis districts of Pahang the delayed and light monsoon rains led to a smaller area being planted and reduced the yields generally for the State.

In the season 1936-37 the prolonged dry period caused some water shortage in Krian which resulted in insufficient rotting down of the cut vegetation in the fields. Consequently growth in the early stages was poor, especially in the south-east of the district, and this check has affected subsequent growth. From the same cause planting was late in parts of Province Wellesley and in the Panchang Bedena area of Selangor where water was scarce in the fields until the first week of November. Floods again damaged areas in Malacca during the last quarter of the year. In Pahang, planting was late through heavy rain in March and April delaying the reduction of water in the *paya*. Planting was similarly late in Kelantan. Prospects for the crop are therefore only fair in most of the chief padi areas of Malaya. A serious outbreak of *Calandra oryzae*, the weevil which attacks stored grain, was reported in the Government Rice Mill at Temerloh in Pahang, but fairly satisfactory control in the mill building was attained.

The All-Malayan Padi Competition, organised by the Malayan Agri-Horticultural Association working in co-operation with the Department of Agriculture, was held in August, for the third year in succession. The total number of entries from all parts of the country were 139 as compared with 126 in 1935. The high standard of previous years was maintained and there was a large number of entries with which little fault could be found.

The average wholesale price of rice during 1936 was $3.63 per picul which was 3 per cent. less than that recorded for 1935. The range of prices of padi in Malaya was from 5 cents a gantang to 15 cents a gantang. The average price at the Government Rice Mill in Krian was $1.91 per pikul as compared with $1.94 per pikul in 1935.

In Krian measures for the control of rats in the padi area have been maintained throughout the year and as a result rat damage to the crop has been negligible. In the new areas of Sungei Manik in Perak and Panchang Bedena in Selangor, however, rat damage was considerable on account of the presence of large quantities of jungle stumps and uncleared areas which harbour these vermin.

In Perak, the Government mills at Bagan Serai and Parit Buntar dealt with 14,000 tons of padi in 1936 (equivalent to approximately six million gantangs) all of which was produced in the Krian district. The mills produced 51,374 bags of parboiled and 39,932 bags of white rice. The small mill in Temerloh, Pahang, bought 4,175 pikuls of padi as compared with 2,341 pikuls in the previous year. Although this quantity of padi is very much below the capacity of the mill, the operation of this plant resulted in the price of padi being maintained at an economic level in both the Temerloh and Raub districts.

Further selection and testing of pure strains of padi, cultivation and manurial experiments and work on padi soils have been continued throughout the year. In Krian experiments now indicate that one strain can be used with advantage for general planting throughout the district. The exclusive use of this strain is being encouraged in order to provide the Government mill with large supplies of uniform grain and thereby to improve the quality of the rice produced.

The three scientific officers appointed to the headquarters staff of the Department of Agriculture for rice research worked throughout the year on problems connected with this crop.

Tobacco.—This crop is grown mainly by Chinese usually in rotation with vegetables, although a certain number of Malay small-holders also cultivate it partly for their own domestic consumption. The planted area varies considerably at different periods of the year under the influence of season and prevailing prices. The crop is grown entirely to supply the local demand and is sold on the cheapest market. The tobacco produced is of a coarse type and is usually manufactured into fine cut leaf in primitive factories by Chinese or is made up into cheap cheroots for local consumption. The amount of tobacco produced locally is unknown but it is totally inadequate to satisfy the demand.

The area under tobacco in the Federated Malay States during the year 1936 was estimated to be 1,846 acres, a decrease of about 248 acres as compared with the previous year. This figure does not of course represent the total area planted or harvested during the year because the crop occupies the ground for only 4½ months, so that many areas may be planted and harvested entirely within the year without being included in the annual survey of areas. It would be fair to assume that the total area planted was twice the area recorded at the end of the year.

Prices for locally grown tobacco varied considerably in different localities, so that it is quite impossible to strike an average for the year, prices in Malaya ranged for $10 per picul for third quality to $45 per picul for first quality. Experiments were carried out by the Department of Agriculture at the Central Experiment Station, Serdang, on the production of flue cured leaf suitable for making cigarettes. These experiments showed that climatic conditions on the western side of the Peninsula are unfavourable. It is felt that better results will be obtained with a darker leafed tobacco as produced in Ceylon and future investigations will be restricted to this type of tobacco.

Stem borer continued to cause a serious damage to the crop in areas where crop rotation was not practised regularly. Slime disease and mosaic disease continued to give trouble.

Fruit.—There is a large demand for local varieties of fruit, especially in the urban centres; the demand is by no means satisfied by local production, in consequence there are considerable imports of fresh fruit from the Netherlands Indies and China each year. The total import of fresh fruit into Malaya for 1936 was 16,435 tons valued at $2,422,850, while imports of dried, preserved and canned fruits amounted to an additional 7,671 tons.

Fruit is grown extensively on small-holdings, the majority being cultivated by Malays. The sale of fruit forms an important source of income to many, and in the mixed population of trees which invariably forms a feature of Malay kampongs a fair proportion of fruit trees is always found. There are, however, at a few points a number of fruit orchards cultivated by Chinese.

The following table shows the areas in acres under fruits other than pineapples in the Federated Malay States:

Year.	Bananas.	Other fruits.	Total acres.
1934	9,985	20,499	30,484
1935	10,662	22,294	32,956
1936	12,902	27,127	40,029

Excluding pineapples and bananas the range of fruit cultivated is very extensive and includes among others such varieties as mangosteens, pulasans, rambutans, durians, chikus, belimbings, langsats and "Mandarin" oranges. The amount of local production cannot be estimated but there is scope for the extension of the fruit-producing industry and for improvements in marketing fruit by combination among growers. A feature of the situation is the periodical gluts which tend, during seasons of flush production, to reduce prices temporarily to uneconomic levels.

A very fair demand exists for planting material of fruit trees of known good quality and in spite of the arrangements for the propagation and distribution of fruit trees at various Agricultural Stations the demand continued to exceed the supply.

Vegetables.—Knowledge of the total area planted with vegetables is very incomplete, but in view of the importance of vegetable production an effort has been made to improve statistical knowledge under this head. It is estimated that the planted area of market gardens in the Federated Malay States in 1936 was 3,514 acres. While there are many definite areas near large towns, each comprised of many small gardens, there are also scattered small areas which, although individually small, in the aggregate comprise a considerable area. In addition to the 3,514 acres of market gardens there are also 600 acres classified under "vegetables" and 150 acres under yams alone. Further, sweet potatoes are grown for pig food and to a lesser extent for human consumption. The area recorded as planted with this crop was 1,731 acres. In the aggregate, therefore, there are nearly 6,000 acres planted with vegetables, including market gardens, vegetable areas and sweet potatoes.

The demand for vegetables exceeds the supply, rendering necessary the import of canned, fresh, and dried vegetables in increasing quantities. The net imports in tons into Malaya in 1936 were as follows:

Year.	Onions and garlic.	Dried, preserved and canned.	Potatoes.	Fresh.	Total.	
					Tons.	Value.
1934 ...	15,687	15,668	12,627	10,049	54,031	3,837,808
1935 ...	15,890	14,142	12,787	9,142	51,961	3,752,863
1936 ...	16,589	15,271	12,661	12,463	56,984	4,204,155

Arecanuts.—The crop is cultivated on an area of 4,235 acres in the Federated Malay States, where it is much less popular than in the Unfederated Malay States, in which the total acreage under this crop was 44,838.

Statistics are not available of the total crop harvested by reason of the fact that the export returns do not represent the total local production, there being a considerable but unascertainable local consumption.

Market prices were lower in 1936 than in the preceding year, the average declared trade value of arecanuts being $121.95 per ton as compared with $128.52 per ton in 1935. The local market price varies considerably according to quality and it is therefore difficult to strike an average price for the year. The average prices in Singapore of "splits" and sliced were $6.41 and $9.54 respectively.

Experimental work on the cultivation of a large number of varieties of arecanut were continued at the Klang and Serdang Experiment Stations, while areas under selected varieties exist on a number of agricultural stations.

GENERAL.

There are 13 agricultural stations, two padi breeding stations, one other main padi station and 24 padi test plots in the Federated Malay States. These were maintained in satisfactory order during the year. At the Central Experiment Station, Serdang, work was continued on a large number of crops; the station continued to attract many visitors. Work at the Coconut Experiment Station at Klang proceeded in accordance with the established programme together with experimental work on copra production. Rice breeding work was continued at the two Experiment Stations at Titi Serong and Tallang, while a large number of experiments on tea were continued at the Experiment Station at Cameron Highlands as well as at Serdang. The agricultural stations continued to discharge their function on the lines which they were designed to follow and have proved their value as centres for demonstration, instruction and the supply of planting material.

Four hundred and twenty-five school gardens were maintained in the Federated Malay States during the year; the general standard of work thereon continued to improve and the annual competitions showed a satisfactorily high standard of upkeep.

The Malayan Agri-horticultural Association held its 13th Malayan Exhibition in Kuala Lumpur in August, and a number of district shows were held, as usual, during the year.

The School of Agriculture, Malaya, situated at Serdang, and supported jointly by the Federated Malay States and the Straits Settlements Governments continued to operate very successfully. The school year opened in May, 1936, with a full complement of 80 boys. Of the 46 students who left school in April, 34 have obtained employment either in the Government service, the Rubber Research Institute of Malaya or in private companies.

The head-quarters research staff of the Department of Agriculture continued to be maintained in Kuala Lumpur. During the year 20 papers representing results of scientific research were published in the *Malayan Agricultural Journal*, as well as in two bulletins. Close liaison was maintained between the scientific staff and agricultural officers in the Field Branch of the Department of Agriculture during the year.

The department continued to issue the *Malayan Agricultural Journal* published in English, three series of special bulletins in English and agricultural journals in Malay, Chinese and Tamil. The most important publication during the year was "An Outline of Malayan Agriculture", which provides the latest information on agriculture in this country. Six bulletins and seven agricultural leaflets were published, the latter for free distribution. The total revenue from publications of the Department of Agriculture showed an increase over that of previous years.

The Rubber Research Institute continued to operate successfully during the year. The building of new premises for the Institute were nearly finished at the end of the year.

LIVESTOCK.

The dairy farm at Fraser's Hill maintained the supply of milk, vegetables and eggs for consumption on the Hill, while there was a small surplus available for sale in towns on the plains. Sales improved considerably as compared with the previous year and were in excess of the expenditure under the head, Other Charges, by $1,746. There was a milking herd of 20 cows and a poultry stock of some 150 birds.

At the Serdang stock farm further work was continued on the interbreeding of crosses between Friesian and Indian cattle. The herd consisted of 62 animals including 28 milking cows. A portion of the milk derived from this undertaking was sold to Government hospitals and the remainder to private consumers in Kuala Lumpur. The revenue obtained from the sale of produce from this farm exceeded expenditure by $3,150.

Reports of the Health Department on the quality of the milk from both the Fraser's Hill and Serdang farms show that bacteriologically it conforms with the standard laid down for certified milk in England. Both milk and herds have been subjected to the tuberculin tests and found to be free from tuberculosis.

The section of the farm devoted to pig breeding has again proved successful and 20 head were sold for breeding purposes during the year mainly to Chinese pig breeders and market gardeners in Selangor.

Much attention has been devoted to the improvement of poultry on small-holdings throughout the Federated Malay States. Experience both in Malaya and elsewhere in the tropics appears to provide confirmation that Rhode Island Red is a suitable breed to rear for general distribution. Success in the past has not been unqualified at several stations, owing to the flocks kept being too small to provide the minimum requirement of breeding pens to maintain a reasonable flock, much less to provide birds for distribution on anything but a meagre scale. With the object of remedying this defect and to simplify the importation of fresh stock as and when required, it has been arranged that the School of Agriculture should provide material for establishing and maintaining stocks at agricultural stations. The poultry breeding establishment at the school is being steadily developed to enable it to fulfil this function of supply to agricultural stations.

Poultry diseases have continued to take toll of kampong stocks, but no particularly serious outbreaks have been reported. Instruction on poultry husbandry was continued in connection with tours of the rural lecture caravan and talks were given on better housing and feeding of village poultry at all centres visited.

A census of livestock collected by the Veterinary Department during the year shows the following figures:

State.	Oxen.	Buffaloes.	Sheep.	Goats.	Swine.	Horses.
Perak	26,034	15,393	402	44,742	80,247	111
Selangor	17,669	2,755	495	36,709	125,468	172
N. Sembilan	11,355	12,355	2,947	22,991	38,149	14
Pahaug	5,514	24,334	4,685	26,712	16,261	28
Total (1936) ...	60,572	54,837	8,529	131,154	260,125	325
„ (1935) ...	59,038	50,030	6,998	116,791	218,917	369
Total increase for 1936 ...	1,534	4,807	1,531	14,363	41,208	

Taking the average values of these animals at $50 a head for oxen, $60 for buffaloes, $5 for sheep, $6 for goats, and $15 for swine, the approximate values of this livestock may be estimated as follows: oxen, $3,000,000; buffaloes, $3,250,000; sheep, $40,000; goats, $750,000 and swine, $3,900,000. This makes a total of $10,940,000. Figures for numbers and value of poultry are not available.

Compared with the year 1935, the census figures show a general increase as indicated in the following table:

State.	Oxen.		Buffaloes.		Sheep.		Goats.		Swine.	
	+	−	+	−	+	−	+	−	+	−
Perak	...	761	598	...	...	65	...	3,607	21,919	...
Selangor	969	...	74	...	218	...	4,795	...	11,735	...
Negri Sembilan ...	720	...	2,106	...	455	...	4,798	...	5,559	...
Pahang	606	...	2,029	...	923	...	8,377	...	1,995	...
	2,295	...	4,807	...	1,596	...	17,970	...	41,208	...
Total Increase ...	1,534	...	4,807	...	1,531	...	14,363	...	41,208	...

Taking the average values given above, the total increase may be valued at $1,077,073, of which swine account for $618,120, and of this latter figure $328,785 applies to Perak.

The increase in oxen in all States except Perak is possibly accounted for to some extent by improved census taking. On the other hand there is evidence that some owners are taking more interest in their cattle and that in some instances there is not the hitherto indiscriminate disposal of animals. In Perak there has been a decrease due no doubt to the demand made on local supply for slaughter animals. In general, the type of animals is inferior, but as owners generally retain the better types for dairy purposes, the disposal of the poorer type for meat supply need not be looked upon with disfavour.

Buffaloes show considerable increase particularly in Negri Sembilan and Pahang. It is perhaps unfortunate that suitable steps are not taken, as in the Unfederated Malay States, to prevent the more or less indiscriminate slaughter of females of this species. Such a measure need not be an undue hardship but could be of ultimate benefit to the Malay buffalo owners.

Except in Pahang and Negri Sembilan there are very few local sheep. On the other hand goats form an important livestock industry and the increases for all states except Perak are very encouraging. In Perak, serious disease including goat pox (stone pox) was responsible for heavy mortality, whilst there was considerable demand, for slaughter animals available locally. With regard to specific goat diseases, one would like to think that these are being eradicated, since one important source of infection, the imported Indian goat, has been eliminated. But once the disease has been introduced there is always a likelihood that unobserved centres of infection remain which of course may give rise to further outbreaks later on. However the Veterinary authorities are exercising the strictest supervision over these animals.

There were large increases in swine particularly in Perak. When foreign supplies to Ipoh abattoirs were cut off the Chinese pig breeders immediately increased their efforts for local production. At the same time Perak was dependent to some extent on supplies from Selangor, Province Wellesley and Kedah. It is hoped, however, that Perak eventually will be entirely self-supporting in slaughter swine.

No special observations can be made on poultry except there is some evidence that improved cockerels are becoming more popular. While imported birds certainly do improve the size of local birds and the size of eggs produced, it is nevertheless unfortunate that at the same time some selection is not made amongst the foundation local stock since there are distinct variations in the quality of existing local birds which, except for devastating disease, withstand local conditions better than European birds. An estimate of the total numbers of birds is not possible at present, but the value of this industry must be very considerable.

Work in connection with animal husbandry generally was continued throughout the year. As its objects this work aims at improvement and increase of the various species, and improvements in the food supply of animals. Lectures, talks and demonstrations are given and wherever possible livestock shows are held. These shows are becoming increasingly popular and there is no doubt that apart from their value as a means of demonstration they afford a valuable means of contact with livestock owners. It is hoped to extend this work.

In Negri Sembilan the Government Veterinary Surgeon instituted a livestock committee to examine the ways and means of improving the dairy cattle on estates and amongst the local Indian dairymen. The committee has furnished its report which gives interesting detailed information and includes constructive proposals for improving the stock in the State. It is hoped the scheme will go ahead and that it will not be long before other States can adopt schemes applicable to local requirements. At the same time a central cattle breeding station is essential to effect further improvements for the benefit of Malaya as a whole, and proposals with this object in view have been made.

The preparation of butter and ghee locally is being investigated and preliminary observations on the manufacture of these products from Malayan buffaloes have been made in Pahang. A very satisfactory product can be obtained but as yet the supply of milk from these animals is so small that milk cannot be taken from the cow without adversely affecting the sucking calf. The whole question of local ghee production from the various species of milking animals is worthy of serious investigation, since this animal fat could be an important addition to the diet of all communities. At the present time the amount of ghee imported annually approximates 700 tons, and this is considered an inferior product.

ANIMAL TRAFFIC.

In September, the importation of cattle from Southern Siam was reopened after this traffic had been closed for more than a year, importation being allowed only by railway via Padang Besar Cattle Quarantine Station to the extent of 100 head to Kuala Lumpur and 50 head to Ipoh, fortnightly. Other sources from which cattle were imported into the Federated Malay States were Kelantan, Trengganu, Kedah, Johore, the Straits Settlements, and Bali (Netherlands Indies) via Singapore. Imports from Kelantan showed a considerable decrease as compared with the previous year.

The following table gives the numbers of animals imported from various sources during the year:

From.	Oxen.	Buffaloes.	Sheep.	Goats.	Swine.	Horses.	Dogs.
(1) MALAYAN AREAS OUTSIDE F.M.S.							
Singapore	...	...	...	..	...	4	7
Malacca	106	197	...	70	1,257	...	11
Penang	..	8	58	29	863		
Province Wellesley	25	...	3	93	14,428		
Kedah	146	241	...	163	2,849		
Perlis	24						
Johore	21	...	...	...	...	...	1
Kelantan	626	492	2	...	14	...	3
Trengganu	411	64	...	20			
Brunei	...	...	...	...	...	...	1
Total (Malayan)	1,359	1,002	63	375	19,411	4	23
(2) OUTSIDE MALAYA.							
Netherlands Indies	162	...	..	492	214		
Siam	304	546					
Australia	9	...	7,187	...	...	...	1
India	...	...	2,623	6			
United States of America	...	...	...	...	...	2	
England	1	...	...	...	2	...	25
Scotland	...	...	...	...	1		
Canada	...	...	...	...	...	...	1
Total (Other Countries)	476	546	9,810	498	217	2	27
GRAND TOTAL	1,835	1,548	9,873	873	19,628	6	50

There is practically no export of livestock from the Federated Malay States though there is considerable inter-State traffic, the more important being export of buffaloes and cattle from Pahang to Selangor and Negri Sembilan, and export of swine from Selangor to Pahang, Perak and Negri Sembilan. There is room for considerable improvement in the export of buffaloes from Pahang for slaughter in the larger Federated Malay States abattoirs.

Outbreaks of foot-and-mouth disease occurred in Perak at Kampar, and at the Ipoh dairy; in Selangor at Serendah, Sungei Choh, and in several areas near Kuala Lumpur. In all, there were 612 cases with 13 deaths.

Outbreaks of goat pox occurred in Perak—in the Krian and Matang districts, 342 being infected, of which 209 died. (The mortality from this disease in Perak in 1935 was 1,713 head.)

In September, a case of swine fever was confirmed at the Kuala Kurau (Perak) slaughter-house and inspection of swine in the vicinity from which the one case was drawn revealed a fairly widespread epidemic. It was fortunate that pig rearing was confined in this part of Krian practically to the Chinese fishing villages on the coastal belt. (Immediately inland of this area pigs are not reared and the epidemic was therefore confined to a definite area.) Adult and young pigs were affected and as the epidemic proceeded a greater percentage of infected pigs recovered. The outbreak lasted from September to December and during this period there were 695 cases of which 512 died, two were destroyed *in extremis* and 181 recovered.

A second outbreak occurred in November on the premises of a Chinese breeder on the outskirts of Taiping. It spread slowly to adjacent piggeries where the mortality was high. There were 160 cases of which 73 died, 64 were destroyed and 23 remained under surveillance at the end of the year.

Detailed observations were made on the disease and these will be published in due course. Measures of control were confined to the strict quarantine of all swine in the area defined as infected; pigs were confined to their owners' premises; carcases of pigs dead of the disease were disposed of under supervision; a census of swine in the infected areas was taken; and routine inspections were carried out by the Veterinary Police. This disease is a serious one of swine and so far as is known it does not occur in the other three States of the Federation or in other parts of Perak. A first essential for the safety of Perak swine is to have effective control over all piggeries and the movements of swine, and so far as is possible, to produce all Perak requirements of swine in the State. Local production should not be difficult of achievement.

Of poultry diseases outbreaks of the virus disease referred to as diphtheritic-stomato-pharyngitis occurred in Perak and Selangor, and an outbreak of fowl-pox was reported from Negri Sembilan. In Kuantan (Pahang) there were three outbreaks of poultry disease.

FORESTS.

At the end of the year there were 7,503 square miles of reserved forest, representing 27.2 per cent. of the total land area of the Federated Malay States, of which approximately 22,400 square miles are estimated to be covered with some kind of forest growth. Much of the unreserved forest has been depleted of its more valuable timbers, and though a certain amount of regrowth of commercial species can be expected, areas subjected to destructive exploitation cannot be regarded as potentially productive in the sense that carefully worked reserves can be so considered. No doubt this is widely appreciated, but at the risk of stressing the obvious it seems desirable to draw attention to the difference between "mining" and working a forest. The timber from State land has been mined, and the stage is rapidly approaching when the requirements of the country and, it is hoped, a remunerative export trade, will have to be met *and maintained* from forest reserves.

Returning prosperity was reflected in a very considerable increase in the demand for timber. Firewood, however, remained practically stationary, for the slight increase that resulted from further releases in the tin industry and the consequent bringing into use of wood-consuming engines that had been temporarily laid up, was more than offset by a very considerable increase in the amount of rubber firewood available at knock-down prices as a result of replanting programmes. This abundant source of cheap though inferior firewood is presenting a serious problem in that it is becoming increasingly difficult to dispose of inferior and unwanted trees in regeneration operations, which could formerly be carried out at a profit and must now be done at a loss, a further aggravation being that rubber wood paid no royalty. The outturn of charcoal was much the same as in 1935, a satisfactory feature being the increasing number of permanent beehive kilns in the mangrove swamps.

Silvicultural treatment with the use of sodium arsenite continued, but on a slightly reduced scale owing to lack of seed for regenerative purposes. One of the most difficult problems in the past has been to budget in advance for expenditure on seeding fellings, which, to be effective, must be conducted as soon as possible after the fall of the seed. It has now been decided that the annually recurrent vote should be sufficiently large to allow for reasonable eventualities, but that failure to spend it all owing to lack of suitable conditions will not result in its automatic reduction in the following year in the manner prescribed for annually recurrent votes generally. This concession introduces an element of elasticity, which will doubtless result in considerable savings and make for increased efficiency.

The total number of saw-mills now operating in the Federated Malay States is 26, of which all but three are of the semi-portable type. There can be no doubt that this mode of conversion has come to stay and that the days of the hand-sawyer are numbered except for the cutting of hardwoods—particularly sleepers—in relatively inaccessible situations. The portable mill with its low overheads and comparatively simple mechanism is far more suitable to Malayan conditions than the large up-to-date outfit with its highly paid personnel, but even the former needs careful watching to prevent it from picking all the plums at the start and leaving itself economically stranded. For this reason a system of licensing is being devised and will shortly be introduced.

Outturn figures for 1936 and the previous year (in brackets) in thousands of cubic feet solid were: timber 11,318 (8,577), firewood 9.130 (8,608) and charcoal 1,186 (1,134); the corresponding revenue figures cannot be given in detail but the totals were $1,017,127 (852,011). Revenue from minor produce rose sharply from $71,084 to $122,597, the most notable increases being *jelutong* $59,938 (18,257) and gutta percha $9,073 (4,650).

The financial results of the year's working were as follows, figures for 1935 being given in brackets for comparison:

Revenue	...	$1,212.078	...	(1,091,346)
Expenditure	...	782,795	...	(876,982) including clerical services
Surplus	...	429,283	...	(214,364)

The decrease in expenditure is explained by the financing of orders placed by the Naval Base contractors through the Timber Purchase Officer's suspense account in 1935. No orders of similar magnitude were similarly placed in 1936 and the expenditure figures are therefore smaller. This, of course, is equally true of the revenue which was correspondingly swelled when the suspense account was reimbursed. A truer comparison between the figures for 1935 and 1936 would be obtained if both revenue and expenditure figures for the former year were reduced by $100,000.

For the reason stated in the previous paragraph, the work of the Timber Purchase Section shows a decrease, although purchases on behalf of the Railways rose from $628,218 to $658,844, the bulk of this being for sleepers of which 283,500 (264,206) were handed over during the year. Business handled on behalf of other consumers fell from $144,514 to $44,846. The export trade, mainly in the shape of sawn timber from Telok Anson to Penang and round timber from the coast of Pahang to the Singapore saw-mills, fell in value from $922,665 to $825,205.

The Forest Research Institute, Kepong, and the Timber Research Laboratory, Sentul, continued to function as usual. Notable progress was made with silvicultural investigations. Research into methods of impregnation continued and an open tank installation capable of treating 25,000 secondary hardwood sleepers per year was erected by the Railways at Sentul where it will be operated under the general supervision of the officer in charge of the Timber Research Laboratory. "*Malayan Forest Record* No. 12"—the first of a series dealing with commercial timbers of the Malay Peninsula—was published during the year.

Federal and State duty posts held by officers of the Malayan Forest Service numbered 26 at the close of the year. The locally recruited English-speaking staff included four Extra Assistant Conservators and six Sub-Assistants, in addition to five Technical Assistants and Timber Inspectors. The subordinate staff included 30 Rangers, 63 Foresters, 329 Forest Guards and 42 Boatmen, all of whom are Malays, and the clerical staff numbered 55 including 45 members of the General Clerical Service.

FISHERIES.

With the exception of a prolonged spell of bad weather on the East Coast, weather conditions were normal and fishing was carried on without interruption.

Catches were up to the average and prices remained good. There were not less than 13,314 fishermen employed in 1936 of whom 7,439 were Malays, 5,721 Chinese, 90 Indians, 60 Siamese and four of Portuguese descent.

Revenue collected from fishing boat and fishing gear licences amounted to $16,314.

The experimental vessel equipped with refrigeration plant commenced operations and two trips were made before the end of the year between Singapore and Pangkor, Dindings. Results were encouraging and it has been demonstrated that it is possible to extend the market for fresh Kembong (Scomber) to Singapore. Work off the Pahang coast had to be deferred owing to the North East Monsoon.

The canning experiments at Beserah were disappointing. The young Malay officer who had been trained for the work developed typhoid fever just when the work was about to start. This necessitated the training of another officer to replace him, since it was considered inadvisable to retain him on this work, and he was consequently transferred to another district. The delay was followed by an unusual spell of bad weather which prevented the Beserah men going to sea. It persisted until the end of the fishing season and very little fish was available for the canning station in consequence.

About 1,000 cans were packed and stored for observation. There is no longer any doubt about the suitability of Kembong (Scomber) and Selayang (Caranx) for packing. They pack well and are excellent food when packed.

The tall round can has not proved altogether suitable: a round flat can is found to be the most suited and will be adopted in future. The station is well equipped and capable of a good output with regular supplies.

It is of interest to record that the use of ice is increasing. A new ice factory has been established at Klang, Selangor; it is operated by some local Chinese of whom some are local fishermen. They are competing in the local ice trade and selling the produce among fishermen. As a result of this competition the price of ice fell from $2.60 per 220 lb. block to $1.60 per block.

The work on the cultivation of fresh-water fish continues and Sepat Siam (Tricopodus), introduced into the newly opened rice growing area of Sungei Manik, are doing well. They are being marketed at a profitable figure and the proceeds from their sale is an important item of income for the rice cultivators.

The work is being extended, and the suitability of river carp and gouramy for cultivation in such borrow pits as are available is being tested.

The experiment station at the 6th mile on the Tapah-Cameron Highlands road was partially completed in March when one pond was stocked with 2,000 mixed fry of Tengas (Lissocheilus) and Kelah (Puntius) which were obtained from the Batang Padang River. They ranged from ½ inch to 1 inch in length when caught and proved to be very hardy and were easily transported. By the end of the year they had attained lengths ranging from 4 inches to 8 inches and it was then ascertained that the Tengas were of two species; a small number of them being a species which does not grow to any great size, as fry they could not be distinguished from the larger Tengas. All have been fed on a purely vegetable diet of tapioca and unboiled rice polishings—growth has not been rapid, but they have accumulated a good deal of fat.

Later, two more ponds were constructed to accommodate Lampan and Terbol and it is hoped that they will spawn and produce fry for distribution.

These fishes have a high food value and being vegetarian are cheap to feed.

The stocking of the Cameron Highlands rivers with trout is being continued. The fish which were liberated in 1935 are doing well and have been reinforced by a further supply of 8,000 young trout of approximately 4 inches in length.

Of this amount roughly 40 per cent. are brown trout and they have been liberated in the Ichat, Terla, Telom and Kial rivers.

They show no tendency to migrate except for their normal search for deep water as they grow larger. Some of the original stock have moved a little way down the Telom and fish from ¾ of a pound to 1 pound in weight may be seen moving out of the deeper pools towards the close of the day.

The beautiful streams are an attractive setting for them. The hatchery stock have matured and are likely to spawn in the early part of 1937.

MANUFACTURES.

There are but few manufacturing concerns in the Federated Malay States. They include four aerated water factories, two match factories, six distilleries, one plywood factory, three pineapple canning factories, one cement works, and a few tile and brick factories.

CHAPTER VII.

Commerce.

The aggregate declared value of the imports, exports and re-exports of the Federated Malay States with countries situated outside the Federation, as compiled from declarations received at the Central Trade Registry during the year 1936 is $343,742,286 as against $273,872,976, an increase of $69,869,310 or about 26 per cent.

The declared value of the imports has risen by over nine million dollars, and there is also an increase in the aggregate value of the exports of over 60 million dollars, mainly due to the increase in the market prices of rubber and copra, and also due to the increased export of tin-ore consequent on the enhanced percentage of the release of tin.

During 1936, the price of tin varied from $85.62½ to $121.25 and averaged $100.44 per picul as against $111.38 per picul in 1935.

The price of rubber varied from 22¼ to 34 cents with an average of 26.86 cents per pound in 1936, as against 20.3 cents per pound in 1935.

The price of copra (sun dried) varied from $4.77 to $8.88 per picul and the average price for the year 1936 was $5.81 as against $4.52 in 1935.

The total value of the imports, exports and re-exports, including bullion and parcel post for the last six years are as follows:

Year.		Imports.		Exports and re-exports.		Favourable trade balance.
		$		$		$
1931	...	106,201,211	...	125,177,183	...	18,975,972
1932	...	71,133,301	...	87,851,281	...	16,717,980
1933	...	67,129,150	...	111,885,935	...	44,756,785
1934	...	84,731,059	...	202,725,341	...	117,994,282
1935	...	87,102,149	...	186,770,827	...	99,668,678
1936	...	96,796,795	...	246,945,491	...	150,148,696

The favourable trade balance for 1936, resulting from the improvement in the prices of rubber and copra, which have increased the value of the exports by over 60 million dollars may be considered extremely satisfactory.

The increase in the purchasing power of the Federation is being reflected in the steady increase in the declared value of the imports into the Federation as shown by the quarterly figures given below:

MERCHANDISE, PARCEL POST, BULLION AND SPECIE.

—	Imports.	Exports.	Re-exports.	Total.
	$	$	$	$
1st quarter, 1936 ...	22,740,495	55,719,849	930,463	79,390,807
2nd " " ...	22,809,484	54,096,354	945,247	77,851,085
3rd " " ...	24,404,231	60,526,152	945,236	85,875,619
4th " " ...	26,842,585	72,457,380	1,324,810	100,624,775
Total	96,796,795	242,799,735	4,145,756	343,742,286

The percentage distribution of the imports, exports and re-exports trade of the Federated Malay States for the last three years is as follows:

IMPORTS.

Countries from which imported.	1934.	1935.	1936.
Singapore	31.42	30.55	30.71
Penang	17.61	19.54	19.43
Malacca	2.00	2.20	1.99
Unfederated Malay States	2.28	2.34	1.96
United Kingdom	12.70	13.65	14.42
British Possessions	9.36	10.52	9.33
Continent of Europe	2.54	2.45	2.80
Siam	9.45	7.53	8.00
Netherlands Indies	9.93	8.48	8.65
Other Foreign Countries	2.71	2.74	2.71
	100.00	100.00	100.00

EXPORTS AND RE-EXPORTS.

Countries to which exported.	1934.	1935.	1936.
Singapore	23.12	24.18	24.59
Penang	28.08	33.13	35.03
Malacca	2.54	1.23	1.48
Unfederated Malay States	.60	.49	.58
United Kingdom	16.62	15.46	6.73
British Possessions	1.14	1.75	2.25
United States of America	15.23	14.02	17.95
Other Foreign Countries	12.67	9.74	11.39
	100.00	100.00	100.00

During the year 1936 the restriction imposed by Sanctions against Italy under the Covenant of the League of Nations by His Majesty's Orders in Council were raised and trade with Italy resumed its normal course after an enforced lapse of eight months.

The foreign (external) trade of Malaya, representing the Colony of the Straits Settlements, the Federated and the Unfederated Malay States, in merchandise, bullion and specie and parcel post, amounted in value to $1,152 (£134) millions, as compared with $1,063 (£124) millions in 1935, an increase of 8.4 per cent. Imports increased by $34 millions or 7.1 per cent. and exports by $55 millions or 9.4 per cent. Increases in both the import and the export trade were spread over the majority of the principal products, the largest increases being in the imports of rubber, liquid fuel, copra, tin-ore, rice, kerosene, other manufactures of iron and steel unenumerated and tin plates, and in the exports of rubber, tin, coconut oil, kerosene, liquid fuel, copra, arecanuts, palm oil and sago flour. There were, as a counterpoise, decreases in the imports of motor spirit, pepper, opium, motor cars, locomotives, swine, and illipi nuts, and in the exports of motor spirit, pepper, gunnies and cotton piece-goods. Exports of rubber increased by $44,221,000 and those of tin increased by $24,059,000.

The $1,152 millions of external trade consisted of imports $513 ($479) millions and exports $639 ($584) millions, the figures for 1935 being shown in brackets. The value of bunker coal, oil fuel and stores taken on board ships on foreign routes for their own consumption amounted to $11 ($12) millions and if this is added to the excess of exports there was a favourable trade balance of $137 millions, as compared with a favourable balance on the same basis of $117 millions in 1935.

Of the $1,152 millions, representing the external trade of Malaya, $981 ($909) millions or 85 (86) per cent. indicate the direct foreign trade of the Straits Settlements, $133 ($121) millions or 12 (11) per cent. the direct foreign trade of the Federated Malay States and $38 ($33) millions or 3 (3) per cent. that of the Unfederated Malay States.

For the Federated Malay States, the total trade amounted to $344 millions as compared with $274 millions for the previous year, an increase of $70 millions or 25.5 per cent. as shown in the quarterly returns of the Customs Department. Of the $344 millions, $139 millions or 40 per cent. represented foreign trade, $202 millions or 59 per cent. trade with the Colony, and $3 millions or 1 per cent. trade with the Unfederated Malay States.

CHAPTER VIII.

Wages and Cost of Living.

The average weighted index of commodity prices, represented by 17 principal commodities (15 wholesale and 2 retail) increased by 14.1 per cent. as compared with 1935, due principally to increases in the prices of rubber, copra, tapioca and coconut oil. There were increases also in the prices of sago flour, arecanuts, palm oil and damar. The prices of tin, pepper, pineapples, rattans, coffee, rice and gambier declined. The following index numbers show changes in commodity values during the last five years:

1932.	1933.	1934.	1935.	1936.
37	45	63	64	73

There was a general decrease in the cost of living for all communities and the index numbers for the Asiatic, Eurasian and European standards given below show that costs in respect of all three standards though slightly lower when compared with 1935 are still higher than in 1914.

Standard.	1914.	1935.	1936.	Percentage increase + or decrease − in 1936 as compared with 1935.
Asiatic	100	108.1	106.0	−1.9
Eurasian	100	109.0	107.8	−1.1
European	100	124.7	124.0	−0.6

The bulk of the labour in the Federated Malay States is employed on rubber estates and tin mines. The labour on the former comes in the main from Southern India whilst that on the latter is mostly Chinese.

Since 1923 the Indian Immigration Committee has had the power to prescribe standard wages for South Indian labourers, such rates being based on a standard budget including foodstuffs, clothing, festival expenses, household equipment, savings, return passages to India and maintenance of dependants. In 1930 the following standard rates were fixed:

COAST DISTRICTS OF SELANGOR.

40 cents a day for each adult able-bodied male.
32 ,, ,, ,, female.

INLAND DISTRICTS OF PAHANG.

47 cents a day for each adult able-bodied male.
37 ,, ,, ,, female.

The price of rubber rose during the year and the permissible output increased at the same time. Many estates began replanting programmes under the Rubber Regulation Scheme.

The price and export allowance of tin also rose. All these factors combined to increase the employment available with the result that wages rose and labourers both Indian and Chinese who came to Malaya during the year were readily absorbed. In no cases, on well-organised estates, were wages of less than 40 cents for men and 32 cents for women paid for tappers in the latter half of the year. The operation of bonus schemes and payment for afternoon work, etc., meant that higher earnings than these were common in most parts of the country.

The price of Rangoon rice which is the staple article of diet for estate labourers fluctuated within small limits during the year, the Singapore prices in January, July and December being 26 cents, 24 cents and 26 cents per gantang, respectively. There was little change also in the cost of the other articles included in a typical South Indian labourer's budget.

Assisted immigration from India was on a very small scale. Except for a few tea and oil-palm estates no kangany licences were issued. The other assisted immigrants consisted principally of men returning from holidays and wives and dependants of men already in this country. The identification certificates issued to labourers on their depature from Malaya to India are now well understood and were of great assistance. The demand for bearer-letters in order to bring in new labourers was not big being restricted mainly to letters for wives and children. Some difficulties were met with but were overcome and at the end of the year the system seemed to be well understood.

In the middle of December the news of an increase in the release of rubber to 75 per cent. for the 1st quarter, 1937, and to 80 per cent. for the second quarter was received. It is gratifying to report that employers in all parts of Malaya took up the question of increasing wages with the result that the United Planting Association of Malaya and the Rubber Growers' Association recommended an increase to 45 cents for men and 36 cents for women as from the beginning of 1937. [These rates were increased in April, 1937.]

Chinese labourers employed on estates are usually paid by results—their wages during the year showed a rising tendency and were between 50-65 cents a day. Of the Chinese labourers employed on mines about 80 per cent. are engaged on piece work and earned between $15 and $18 a month those employed on daily wages earned from 60 cents a day upwards.

CHAPTER IX.

Education.

A.—General.

The expenditure upon education (including $278,025 spent by the Public Works Department on the building and upkeep of schools) was $3,510,471. Of this sum, $417,668 was paid in grants to English aided schools, $70,626 in grants to Tamil vernacular schools and $115,922 in grants to Chinese vernacular schools. The total revenue amounted to $530,335 of which the sum of $233,992 represents the proceeds of the education rate, the remainder being derived from school fees and miscellaneous sources. The net expenditure on education was, therefore, $2,980,136.

Education facilities are provided in the Federated Malay States in English, Malay, Chinese and Tamil.

Schools are either Government, Aided by Government, or Private.

All schools (other than those in which the teaching is of an exclusively religious nature) in which ten or more persons are habitually taught in one or more classes, and all supervisors, committees of management and teachers of schools must be registered in accordance with the Registration of Schools Enactment. In pursuance of the decentralisation policy of the Government the powers of the Federal Director and Assistant Directors of Education have been handed over to State officers who are now called Superintendents and Assistant Superintendents of Education.

The reprinting of Education Codes was undertaken during the year and the following revised editions were issued:

Part I.—General Regulations for Government and Aided English Schools in the Straits Settlements and Federated Malay States.

,, II.—Regulations for Aided English Schools in the Federated Malay States.

,, III.—Suggestions for Inspectors, Principals and Staffs of English Schools in the Straits Settlements and Federated Malay States.

,, IV.—A List of Scholarships in the Federated Malay States together with Rules for the Remission of Fees.

Part VII.—General Regulations for Indian Vernacular Schools in the Straits Settlements and Federated Malay States.

The following Education Codes were in print at the close of the year:

Part V.—Regulations for Malay Vernacular Education in the Straits Settlements and Federated Malay States.

,, VI.—Regulations for Chinese Vernacular Schools in the Straits Settlements and Federated Malay States.

B.—ENGLISH EDUCATION.

The "English schools" are those in which English is the medium of instruction. Less than half of the pupils come from English-speaking homes. The lowest class may be composed of children speaking between them some seven or eight different languages or dialects, those speaking one language or dialect being generally quite unable to understand those speaking any of the others. In the circumstances the use of the "direct method" of teaching English is practically obligatory. Children are accepted into the lowest class at the age of six or seven and are given an education which ends as a rule with their presentation at the Cambridge School Certificate Examination, though a few stay on to prepare for the London Matriculation Examination or to enter for the Queen's Scholarship Examination.

The fees for pupils enrolled before the 1st January, 1934, are $30 (£3 10*s*.) a year for boys and $24 (£2 16*s*.) a year for girls for the first six years (i.e., for the years spent in the two Primary Classes and in Standards I to IV inclusive) and $48 (£5 12*s*.) a year for boys and $36 (£4 4*s*.) a year for girls for the remaining period. The rates for boys and girls enrolled on or after the 1st January, 1934, are $36 (£4 4*s*.) a year for the first eight years (i.e., up to and including Standard VI) and thereafter $72 (£8 8*s*.) or $108 (£12 12*s*.) a year, according to the results of an examination, the successful pupils, up to 50 per cent. of the available places, paying the lower fee and the remainder paying the higher one.

Education is not compulsory.

In 1936 there were 23 Government English Schools for boys and 12 Grant-in-aid English Schools for boys and 13 for girls. The total average enrolments were 6,633, 5,553 and 4,699, respectively, a total increase of 389 on the 1935 figures.

Of the 16,885 pupils in English schools at the end of the year, 2,864 (or 16.96 per cent.) were enjoying free education. The details of the nationalities so benefited were 198 Europeans and Eurasians, 1,784 Malays, 618 Chinese, 237 Indians and 27 others.

The Aided English Schools are managed by various missionary bodies—the Christian Brothers, the Methodist Episcopal Mission, the Church of England, the Plymouth Brethren and the Sisters of the Holy Infant Jesus.

The Government pays to such schools monthly grants equal to the difference between their revenue and approved expenditure. The approved expenditure includes Government rates of pay for the lay staff, rates and taxes on school premises, the cost of minor repairs and equipment, and salaries in respect of European Missionary teachers at the rate of $3,000 (£350) a year for men missionaries and $1,800 (£210) a year for women missionaries. Allowances at these rates, however, are payable only to 16 per cent. of the total authorised staff in boys' schools and 25 per cent. of that in girls' schools. The other missionary teachers, European and Asiatic, are paid at the rate of $1,440 (£168) a year for men and $1,200 (£140) a year for women. In Christian Brothers' Schools and Convent Schools no distinction is made between European and Asiatic Missionary teachers who are all paid at a flat rate of $2,400 (£280) a year for men and $1,500 (£175) a year for women. Under certain conditions capital grants amounting to half the cost of approved new buildings are also paid by the Government.

Owing to the financial position the Government restricted the amount of grant-in-aid paid in 1934 to three-quarters, and in 1935 to two-thirds, of the sum paid in respect of the year 1932. In 1936 the grants-in-aid were paid in accordance with the regulations.

The Malay College, Kuala Kangsar, is a secondary school for the sons of the Malay Rulers and for other Malay youths of good family, which in addition trains probationers for the Malay Administrative Service and for certain other Government departments. At the beginning of the year there were 119 students, and at the end of the year 138—50 from Perak, 26 from

Selangor, 29 from Negri Sembilan, 18 from Pahang, 6 from Johore, 2 from Trengganu, 2 from Kelantan, 3 from Perlis, 1 from Brunei and 1 from Sarawak; at the end of the year the College was as full as it had ever been. The staff consisted of the Headmaster and three European and five Asiatic Assistant Masters. Apart from an epidemic of mumps in the middle of the year, which attacked most of the boys in the small school and a few in the big school, the health of the boys was good; the Medical Officer, Kuala Kangsar, visits the school and examines the boys regularly, and he has so won their confidence that a boy in the small school looked on an operation for appendicitis as rather a joke. In July, 8 out of 12 students were awarded the Cambridge School Certificate, and 8 out of 12 the junior one. In December, Raja Zahar bin Raja Badiozaman, the School Captain, was awarded the Queen's Scholarship reserved for Malays; he intends to become a Civil Engineer and to return to take up service with the Public Works Department. Four probationers in the Malay Administrative Service appointed in 1935 left in July, and six new probationers joined the College in August. Cadet and scout activities form part of the school routine; parades are held twice a week. The average strength of the cadets was 3 officers and 48 other ranks, the corps was inspected by the Assistant Staff Officer to the Local Forces and received a good report. The average strength of the scouts was 3 officers, 42 scouts and 28 tenderfeet. Games are compulsory, one or other of the principal games—football (association), cricket and hockey—being played by each boy three times a week, while on other days he has to play tennis, fives or badminton, or do physical drill; the swimming pool is well patronised; the masters assist and if possible take part. The usual Annual Athletic Sports Meeting was held; the prizes, with a few exceptions, were provided from the profits of a tuck shop which is run by the boys themselves. The Headmaster reports that he saw more initiative and self-reliance shown throughout the school during 1936 than in any previous year. The cost of running the College was $59,612 as compared with $56,041 in 1935; the fees collected amounted to $8,561, the same sum as in 1935.

There is no central college for the training of teachers for English schools. Teachers for elementary and secondary classes are now recruited from Raffles College and teachers for primary classes from normal classes which when required are held at centres in each of the States of Perak, Selangor and Negri Sembilan; in the State of Pahang correspondence classes take the place of normal classes. In 1936 there was only one normal class; it was held in the State of Selangor and was attended by 24 students, all women.

C.—Vocational and Industrial Education.

The Government Technical School, Kuala Lumpur, a Selangor State Department with Malayan functions, provides courses of training for students sent to it by the Public Works, Drainage and Irrigation, Electrical, Post and Telegraphs, Survey and Railway Departments; in 1936 for the first time in its history, it received students from the Straits Settlements Public Works Department; a few private fee-paying students are accepted. The number of students under full-time instruction in May (the end of the school year) was 78, one more than in 1935, of whom 63 were apprentices from the departments mentioned, 2 were private students supported by scholarships and 13 were private fee-paying students; forty-two were Malays; sixteen completed their training during 1936 and all passed the final examination; the number in the school at the end of the year was 91, of whom 16 were private fee-paying students. The number of applications for places was greater than ever before, and the students admitted, it is reported, were more "technically minded" than they used to be. The school hostel has accommodation for 48 students and was occupied by 46 in May and by 63 in December; the school gymnasium had to be converted into a dormitory to meet the increase in numbers. Certain of the City and Guilds of London Institute Examinations are held in Kuala Lumpur, Ipoh, Singapore and Penang, and the number of candidates who applied to sit for them in 1936 was 157 as compared with 152 in 1935; forty-eight students of the Technical School sat for one or more of them and 46 passed, one being awarded a bronze medal. Special lectures by officers of the Posts and Telegraphs Department proved to be of great value. Classes in hygiene and first aid, conducted by the Medical Department, to which the school is grateful, were continued and were very popular. Discipline on the whole was good, health excellent, and attendance (99.4 per cent.) very high. The students maintained their sports activities, and took up the playing of rugby football for the first time. Small additions were made to the laboratory equipment, and a considerable number of modern reference works were added to the library, these being made full use of by both instructors and students.

The Technical School Advisory Committee met once to consider a salary scheme for the instructors; the scheme was accepted by Government and all instructors were brought on to it in July. The expenditure from Education Department and Clerical votes, exclusive of that on leave pay, pensions, etc., was $30,553.13, and the revenue was $5,248.18.

Commercial Education.—There were no purely commercial schools and no separate departments for purely commercial work in any of the schools.

Industrial Education.—There were schools engaged in giving an industrial education—the Trade Schools at Kuala Lumpur and Ipoh, and that at Bagan Serai.

(*a*) The Trade School, Kuala Lumpur, admits boys from Selangor, Negri Sembilan and Pahang. The students do a three years' course, being trained to be fitters and motor mechanics and tailors. The number of students was 111—79 from Selangor, 23 from Negri Sembilan and 9 from Pahang. Ninety-three were in the mechanics classes, the remaining 18 being in the tailoring classes. Twenty-eight mechanics completed their course in June and of these 26 have obtained employment. Thirty-one new students were admitted in July. The number of new admissions to the tailoring class was 12. Seventy-six of the boys reside in the Trade School Hostel. The revenue amounted to $1,221, $807 derived from profit on labour expended on commercial work and $414 being from fees from private fee-paying students.

(*b*) The Trade School, Ipoh, provides a general course in automobile engineering and a specialist course in the last year (3rd year). There were 70 students at this school, 59 being Malays. Twenty-four completed the three years' course in June. All except one have been found employment. Four of these receive subsidies of $10 per mensem as "improvers" in employment.

(*c*) The Trade School, Bagan Serai, provides a three years' course in carpentry. The enrolment at the end of 1936 was 37—26 in the first year, 8 in the second year and 3 in the third year. The enrolment is disappointing and the future of the school is now receiving close consideration.

A three years' course in carpentry is taught in 12 Malay schools in Perak. These classes are taught by graduates of the Bagan Serai Trade School. They are useful in bridging the gap between the ages of 12 or 13 (when a boy leaves school) and 15 or 16 when he is old enough to work, but few pupils of these classes settle down as carpenters in after-life. One obstacle is that they lack the capital to undertake any contract worth more than a dollar or two.

Evening classes in English were held as usual at the Maxwell School in Kuala Lumpur, most of the students attending them being boys from the Trade School or the Central Workshops. A class in Précis-Writing for members of the State Clerical Service was also conducted.

Evening science classes open to the general public were held at the Victoria Institution, the course followed being an outline of general science. Eighty-three persons attended the classes; a number of subordinate officers from Government Technical departments were amongst these.

D.—UNIVERSITY AND COLLEGIATE (POST-SECONDARY) EDUCATION.

The highest educational institutions in Malaya are the King Edward VII College of Medicine and Raffles College, both in Singapore. The course at the College of Medicine covers six years and is recognised by the General Medical Council of the United Kingdom. Licentiates of the College are thus able to secure admission to the Colonial List of the Medical Register and to be registered as medical practitioners in any part of the British Dominions.

There is also a fully organised dental school in which a five years' course of training is given, the diploma in Dental Surgery entitling its holder to practice in Malaya.

There is a four years' course for a diploma in Pharmacy, entitling the holder to register under the Registration of Pharmacists Ordinance and to hold a licence under the Poisons and Deleterious Drugs Ordinance, thereby enabling him to practise as a dispenser in Malaya.

Raffles College was opened in 1928 in order to place education of a University standard within the reach of all youths in British Malaya who were capable of profiting by it, and to meet an urgent need for qualified teachers for secondary classes. It provides three year courses in arts and science, and diplomas are awarded to successful students.

The College awards annually ten entrance scholarships of a value of $720 a year tenable for three years, and a limited number of second and third year exhibitions, not exceeding $500 a year in value, are available for students who show exceptional ability during their first or second years at College.

The annual examination for the Queen's Scholarships was held as usual in October. There were 13 candidates for the open scholarship and 5 candidates for that confined to Malays. The scholarship open to all races was awarded to Ng Wah Hing of the Anglo-Chinese School, Ipoh, and that confined to Malays to Raja Zahar bin Raja Badiozaman of the Malay College, Kuala Kangsar. Both propose to study engineering.

E.—VERNACULAR EDUCATION.

Malay Vernacular Schools.—Malay vernacular education is entirely free. School buildings (as a rule), quarters for staff, staff, equipment and books are all provided by Government.

The aim in these schools is (i) to give a general and practical education to those boys and girls who will not receive an English education and who will find employment in vocations like agriculture in which a knowledge of English is not essential, and (ii) to provide preliminary vernacular education for pupils who will later receive an English education.

In 1936 there were 472 schools for boys and 82 for girls with average enrolments of 42,945 and 5,635 respectively. The figures for 1935 were 465 schools for boys and 82 for girls with average enrolments of 38,064 and 5,082 respectively. The Malay teaching staff numbered 1,375 men teachers and 246 women teachers as against 1,324 men and 227 women in 1935. There were 7,790 girls in boys' schools in the four States.

The school course normally last five years, during which period the pupils pass through five standards. In a few schools in Perak there exists a Sixth Standard. In no case is a boy allowed to stay more than two years in Standard V.

The subjects of the curriculum are reading and writing (in both the Arabic and the romanised script), composition, arithmetic, geography, Malay history, hygiene, drawing, physical training, basketry (or some other form or forms of handwork) and gardening.

In the Malay girls' schools all general subjects were taught, a shortened form of the syllabus in the boys' schools being attempted. In the Perak schools domestic science was taught, one whole day a week being given up to instruction in laundry, housecraft and cookery. Drill and practical hygiene figured as subjects on every school time-table.

Needlework was taught in all the girls' schools, and in boys' schools in which girls were numerous and to which women teachers have been appointed. The crafts taught included weaving, the making of mengkuang (screw-pine) mats and baskets, lace-making and pottery. The weaving suffered from lack of definite skilled supervision; the teachers produce fabrics from time to time but the pupils do not appear to learn much and seldom follow the craft after leaving. Better work is done in mengkuang and basket-making, in which good progress was made. Raffia and paper weaving were taught in the lower standards of girls' schools.

Gardening was taught in most of the Malay schools and there was usually a good reason for the absence of a garden at a school: sometimes a rice-plot was cultivated instead, and sometimes the local conditions were unsuitable, as, for example, at Jeram Pantai in Selangor where the school compound is inundated periodically with salt water. Regular visits were paid by officers of the Agricultural Department to practically all schools and the gardens benefited greatly from their supervision. Vegetables, fruits and basketry materials were grown. Awards are made annually to the best garden in each district. The teachers showed themselves keenly interested. The general standard of the gardens was creditable, especially as regards cleanliness; compounds also were for the most part well-kept and some reached a very high standard. Flowers are grown in all school gardens.

Sultan Idris Training College, Tanjong Malim.—At the end of the year there were 361 students, and one Kedah and one Kelantan Probationer at the College. In addition there were five students taking a post-graduate course and five craft students. One hundred and eighteen students completed their three-year course. The total expenditure was $100,606 (as against $108,924 in 1935) towards which the Unfederated Malay States contributed $44,075 for their 90 students and two Probationers.

The cost of the establishment is borne by the State of Perak in the first instance and is subsequently apportioned between the States of the Federation, the Straits Settlements and the Unfederated States. The amount paid by the Federated Malay States and Straits Settlements respectively is proportionate to the number of students from each while the Unfederated Malay States pay a fixed sum for each pupil.

The College provides the highest course in Malay vernacular education obtainable in the Peninsula, while attached to it is a Translation Bureau which not only prepares the text-books required in the schools but also translates into the vernacular and sees through the press a variety of novels and books of general interest. The total cost of this bureau was $14,152 as against $14,892 in 1935.

The Federated Malay States Art Superintendent was on duty in the craft schools during the year as well as supervising the College art and handwork. The original school has been divided into smaller schools each devoted to a single craft—textiles, pottery, silverwork, weaving and carpentry. Each student studies only one craft. The total number of students in 1936 was 22. Amongst these five were post-graduate students, five special craft students from Kedah, Kelantan and Pahang and 12 local boys.

(*a*) *The Textile School.*—A new technique was added during the year, the style of printing called "Yuzen" by the Japanese. It is similar to stencilling but the method of printing and the mixture of the printing paste make possible effects beyond the range of ordinary stencilling; it is much quicker too. A demonstration of the craft was given at the Malayan Agri-Horticultural Association Show in Kuala Lumpur.

(*b*) *The Pottery School.*—This year saw the culmination of some years of experimenting with local materials. The College now has stoneware glazes which fit the body perfectly without any sign of crazing and take on many shades of colour according to temperature and atmosphere in the firing. All the materials are obtained locally and are prepared by the students.

(*c*) *The Silverwork School.*—There was only one student in this branch which lacks a competent silver-smith who can teach large work. It is hoped to remedy this shortly.

(*d*) *The Weaving School.*—Weaving was started at the beginning of the year. There are three looms in constant use now. The yarn is dyed at the College in fast colours. The first-year work was confined to sarong making in tabby or plain weaving in various colours. The finished work sold easily.

(*e*) *Minor Crafts.*—Carpentry is still carried on in a small way, chiefly in the making of blocks and other articles for textile printing. Another branch of the carpentry class carried out minor repairs to furniture. Other trades carried on in this section are chick-making, book-binding, lamp-shade making, tailoring and reptile-skin tanning. The last mentioned craft was introduced during the year and shows signs of being a lucrative occupation if the Malays can conquer their aversion to handling the dead snakes. All these trades have their quota of local boys as trainees.

The Malay Women Teachers' Training College, Malacca, which opened in 1935, had an enrolment of 24 students drawn from the Straits Settlements and the Federated Malay States. The staff consisted of a Principal and an Assistant, both Europeans. The health of the students was good and there was a gratifying improvement in personal hygiene, mainly due to the popularity of "beauty" classes and to the rivalry in nicety of lingerie that arose, but one or two girls needed strict hair supervision and verminous heads continued to be still a matter of great concern; the cleansing of food utensils and dishes left much to be desired unless supervised daily, while drill in mannerly and tidy eating was very necessary. General behaviour was excellent, the students showing some aptitude in themselves arranging for amusements during their leisure time; a debating society inaugurated and managed by the students met once a week; a prefect system was introduced and worked very well indeed. By the end of the year the students were able to take notes with reasonable accuracy in sense and spelling, and the results in the final examination were distinctly better than in 1935; arithmetic and the scientific aspect of geography were subjects that remained difficult to the majority, but history made special appeal; all branches of industrial work gave great satisfaction when treated in class, but application of the training to daily life was exhibited by only a few of the students. Every student taught six criticism lessons during the year; the lessons showed vitality and, occasionally, originality on the part of the teachers, but there was usually a lack of forethought and a failure to grasp the child's difficulties. Badminton continued to be the principal game played, the bad condition of the temporary field militating against the popularity of netball; all forms of physical exercise were taught; included were class drill, country dancing and rhythm. On Fridays the students entertained to tea and games the staffs of the girls' schools in the neighbourhood and the members of the Malacca Girls' Club; in April they gave a performance of "The Sleeping Beauty" before an audience of Europeans, and in original sketches fully exhibited the natural dramatic wit of the Malays; at a meeting held for the purpose of the presentation to the French Convent of the Badminton Cup, the students entertained 200 guests; visits to the cinema were arranged once a month whenever a suitable film was screened. All students admitted in 1935 completed two years' training by the end of the year and were appointed teachers in Malay girls' schools in December.

Chinese Vernacular Schools.—The two Government Chinese Vernacular Primary Schools at Kuala Lumpur, namely, the Chinese Free School, Davidson Road, and the Chinese Free School, Sentul, continued to function satisfactorily. At the end of the year the former had a staff of one headmaster and seven teachers and an enrolment of 240 students, while the latter had one headmaster and two teachers and 85 students. Both schools accommodate both boys and girls and the education is free. The Davidson Road School is primarily for children of poor parents and the Sentul School for the children of Railway employees.

The number of Chinese schools receiving grants-in-aid in 1936 was 168, Perak having 92 as against 70 in 1935, Selangor 51 as against 31 in 1935, Negri Sembilan 15 and Pahang 10 as against 4 and 2 respectively in 1935. The total grants paid to these schools was $115,921.50 as against $79,897 in 1935.

The grants to Chinese vernacular schools are in two grades for primary schools, $10 (£1 3*s.* 4*d.*) a year or $5 (11*s.* 8*d.*) a year for each pupil in average attendance. The grant system was extended in 1936 to Middle schools at the rate of $18 (£2 2*s.*) a year or $12 (£1 8*s.*) a year for each pupil in average attendance. In order to qualify for the higher grade, schools must teach English with reasonable efficiency and must employ for that purpose a teacher who holds the minimum qualification of a Junior Cambridge Certificate or a certificate recognised by the Adviser on Education as of equal value. In addition to these grants certain schools with Normal Classes receive a special grant of $25 (£2 18*s.* 4*d.*) a year in respect of a limited number of pupils in their normal classes. This number is determined by the number who may be reasonably expected to be absorbed as teachers in the local schools.

There are three types of schools:

(i) those managed by properly constituted committees;

(ii) pseudo-public schools, i.e., schools organised by one or more teachers who choose their own "committee members";

(iii) private schools run by a teacher who relies on the school fees for his livelihood, these schools being usually small and old in type.

There are several free schools at which a nominal fee of 50 cents (1*s.* 2*d.*) a month is charged. The fees in other schools are usually round about $2 (4*s.* 8*d.*) a month.

In almost all the private schools the native dialects of the pupils are still used in teaching, but in the other schools Colloquial Mandarin is the almost universal language of instruction. English is taught in many of the large schools and in some of the smaller. The standard is very low, but attempts have been made to improve it by insisting on a minimum qualification of a Cambridge Junior Certificate from teachers engaged solely to teach English, and by having a standard curriculum drawn up for the guidance of teachers of English.

The primary course in Chinese schools normally occupies six years. The Government has little if any control over the fees charged, the hours of attendance, or the length of holidays in any except the Aided schools. The usual school subjects are found in the curriculum.

In January four Middle schools in Sitiawan were amalgamated to form the Nan Hwa High School, the only purely secondary school in the Federated Malay States. There are, in addition, 12 Chinese schools (four in Perak, four in Selangor, three in Negri Sembilan and one in Pahang) which have developed beyond the primary stage and have secondary departments. The Confucian Boys' School, Kuala Lumpur, started a Senior Middle Department with an enrolment of 18 at the commencement of the second school term in August, 1935. It is intended to convert this class into a Normal Class. There were 628 boys attending these schools at the end of 1936.

Secondary vernacular education for Chinese girls was provided at one girls' school and three mixed schools in Perak, one girls' school and two mixed schools in Selangor, three mixed schools in Negri Sembilan and at one mixed school in Pahang. There were 232 girls attending these schools at the end of the year.

Normal Classes for the training of teachers were started in January by two schools in Perak and two in Selangor. For grant-in-aid purposes, a total of 75 pupils was allowed for each State. It is hoped that these classes will have the effect of improving the standard of teaching in the primary schools.

The second joint Straits Settlements and Federated Malay States inter-school examination for Chinese schools was held in December. There were 1,035 candidates from the schools in the Federated Malay States. One hundred and thirteen schools were represented of which 92 were aided. The examination was for the graduating forms of the Junior Middle and Upper Primary Departments, and all public schools which had a participating class and which were at a convenient distance joined in the examination. There were four examination centres in Perak, three in Selangor, one in Negri Sembilan and one in Pahang. In the Junior Middle Section, 225 candidates sat and 61 or 27.11 per cent. passed. In the Upper Primary Section there were 782 candidates of whom 276 or 35.29 per cent. passed. The results show considerable improvement over those of 1935.

For the first time the department organised inter-school sports in Kuala Lumpur and Ipoh for Selangor and Perak schools respectively. The Selangor sports were held on August 12th and 13th on the Victoria Institution ground. Fifty-four schools with 692 competitors took part. The Perak sports were held on August 28th and 29th at the Chinese Town Hall ground, Ipoh. Fifty-five schools with 974 competitors took part. Cups, challenge shields and medals were presented by prominent Chinese in each State. The meetings were a success and it is intended to make them annual events.

At the close of the year there were 420 registered Chinese schools with 1,362 registered teachers. The total enrolment was 33,826, of which, 8,828 were girls. Compared with the previous year there is an increase of 26 schools, 150 teachers, 3,292 boys and 1,006 girls.

Tamil Vernacular Schools.—At the end of the year there were 13 Government vernacular schools as in 1935—8 in Perak, 4 in Selangor and 1 in Negri Sembilan. In addition there were 345 aided schools (as against 297 in 1935). There were 15,686 pupils in both Government and aided schools, a total increase of 2,915 pupils on the 1935 figures. Though co-education is not a policy, a number of girls attend boys' schools. In 1936 there were 5,260 girls in Government and aided boys' schools. In Perak there was one school exclusively for girls run by the Roman Catholic Missionaries.

No fees are charged in Government and Estates' schools but in some of the schools run by private bodies the pupils pay. There is usually an arrrangement in such schools whereby poor children pay little or nothing. Government schools and private aided schools generally produce better work than the average estate school, but on estates where the labour force has been settled for years the standard of the work is as good as in town schools.

A new Assistant Inspector of Tamil Schools was appointed in Perak in February to fill the vacancy caused by the death of his predecessor and the considerable increase in the number of schools necessitated the appointment of an additional Tamil Visiting Teacher in July.

The post of Tamil Assistant Inspector of Schools was restored in Negri Sembilan and the officer who was officiating in that capacity until retrenched in December, 1933, was reappointed.

There was no provision for the training of Tamil teachers.

The total grant paid to aided Tamil schools in 1936 amounted to $70,626 as against $55,739 in 1935.

F.—RECREATION, MUSIC, ART AND DRAMA.

Recreation.—Every encouragement was given to pupils to participate in school games. In almost all English boys' schools the maximum amount of games and organised sports, normally of the "team" variety, is provided. Nearly all schools have one or more Scout Troops and some of the big schools have Cadet Corps in addition.

Cricket grows more and more popular. Football (association), hockey, volley ball, basket ball, tennis and badminton are played at most schools. Rugby football is played and gymnastics provided at some of the bigger schools.

In all English girls' schools, as in boys' schools, drill and games are now compulsory. Some girls' schools play basket ball and have tennis and badminton courts.

Physical training reaches a good standard in Malay boys' schools, and association football, encouraged by inter-school competitions, is much indulged in. Cricket has been taken up by two schools in Perak.

The guide movement received considerable impetus from the official visit to Malaya of an officer specially qualified to take training courses. The scout organization during the year recorded special extension in the Rover Scout movement which rendered much useful service to the various school troops and packs. Malacca won the competition for the Scout District with the best Malay School Troops in the Peninsula. In the parallel competition for the best English School troops, Negri Sembilan, was placed first and Penang second.

Music.—Music is taught in all Convent schools and occasionally elsewhere. Singing is taught in the lower forms of all schools. Most schools have gramophones and a few have pianos. Cadet Corps and a few Scout Troops have their own bands.

Handwork and Art.—Handwork is taught under the supervision of trained European mistresses in the primary and elementary departments. The following subjects were included in the curriculum: paper cutting, folding, tearing and modelling, clay and plasticine modelling, cardboard modelling, stick-laying, bead-stringing, paper flower making, raffia work and woodwork. All English girls' schools teach needlework; a very high standard is generally attained.

Drama.—The drama forms part of the English curriculum of all English schools. The lower standards act simple plays and dramatic stories. The senior boys and girls perform scenes from Shakespeare.

CHAPTER X.

Communications and Transport.

Posts, Telegraphs, Telephones and Wireless.

Posts.—During the year under review, full postal facilities were provided at 101 post offices in the charge of officers of the Posts and Telegraphs Department. Restricted postal services were performed at 73 postal agencies by officers of the Customs Department, Railway Station Masters and others who acted as postal agents. There were 173 persons licensed to sell stamps.

A postal agency was opened on the 1st February, 1936, at Ulu Bernam Estate, in Perak, and another was established at Karak, in Pahang, on the 1st October, 1936. The Customs Department's officer at the Batu Laut Postal Agency in Selangor was replaced by an officer of the Posts and Telegraphs Department on the 20th August, 1936.

At the end of the year 315 posting boxes were in use over and above those available at post offices and postal agencies.

During the period under review 245 licences for the collection of letters for transmission to China under the clubbed packet system were issued. Under this system certain Chinese shop-keepers are privileged to send to China a number of letters bundled together in a single packet. These letters comprise advices of remittances sent by Chinese immigrants in Malaya to their dependents in China. The shop-keeper receives the money and advises his agent in China by letter of the amount in local currency remitted and to whom the money is to be paid.

The expansion of the air-mail services made rapid strides during 1936. The more important developments were (*a*) the inauguration on the 23rd March, 1936, of the Imperial Airways once-weekly service between Penang and Hong Kong; and (*b*) the duplication as from the 15th May, 1936, of the Qantas Empire Airways' weekly service between Singapore and Australia. The Penang-Hong Kong air service is of special importance to Malaya; it affords a gain of about three days over surface transport to Hong Kong, and is used also for the transmission of letters addressed to China, Japan, Macao and the Philippine Islands with a very considerable saving in time. The large extent to which this service is already being used by the Malayan public gives ample proof of the benefits bestowed upon the general community.

The extension of the air-mail money order service to Hong Kong, China, Japan, Macao and the Philippine Islands on the 28th March, 1936, the general introduction of combined air and postage fees for letters and postcards on the 1st April and the admission to the air-mail service to Hong Kong of clubbed packets (remittance letters) for China on the 8th May are other developments worthy of mention.

The average weekly weight of mail from Malaya to Great Britain conveyed by the Imperial Airways Service steadily increased throughout the year from 361 lbs. in January to 390 lbs. in November. The heaviest mails during the year were those despatched in December with their Christmas and New Year Greetings traffic; the three mails during the period ended the 20th December totalled 1,616 lbs. compared with 1,536 lbs. during the corresponding period in 1935.

Money Orders.—Money order business is transacted at all post offices and at certain postal agencies, and during the year 310,237 money orders to the value of $13,842,117 were issued and paid, representing an increase of 12,637 in number and $1,153,045 in value over the 1935 figures. Telegraph money orders included in the main 1936 total amounted to 17,883 in number and $1,808,232 in value.

Savings Bank.—The number of depositors in the Federated Malay States Government Savings Bank on the 31st December, 1936, was 76,759 as compared with 67,840 on the 31st December, 1935, representing an increase of 13 per cent. During the year 16,840 new accounts were opened while 7,921 accounts were closed.

The amount standing to the credit of depositors on the 31st December, 1936, was $8,939,223 as compared with $7,578,619 on the 31st December, 1935. The average amount to the credit of each depositor was $116 as compared with an average of $112 per depositor in 1935.

There were 48,196 withdrawals on demand during the year as against 47,327 in 1935 and 374 withdrawals by telegraph as compared with 434 in 1935.

Telegraphs.—The number of postal telegraph offices in the Federated Malay States is 103.

The total number of telegrams sent and received in the course of the year was 393,057, a decrease of approximately 2 per cent. compared with 1935 figures. The total value of telegraph business including Government messages sent free of charge increased from $173,519 in 1935 to $189,894 in 1936, an increase of approximately 9 per cent.

The total numbers of Inland Greetings Telegrams handed in during the year were as follows:

Christmas and New Year	840
Chinese New Year	165
Hari Raya Puasa	222
Deepavali	163
Hindu New Year	25

During the year the new service indication "NLT" was introduced, denoting Night Letter Telegrams Service (Foreign). This service at present operates between Malaya and Great Britain, Northern Ireland, Irish Free State and Hong Kong only. These telegrams generally follow the rules for Daily Letter Telegrams as regards charge and special services admitted except that the normal delivery will be on the morning after the day of handing in.

Satisfactory teleprinter (telegraph) working was maintained on the main telegraph circuits throughout the year and, in continuation of the policy to eliminate morse working, the Ipoh-Penang morse circuit was replaced by teleprinter.

The following morse circuits were converted to telephone-telegram working:

Taiping-Ayer Tawar-Sitiawan-Lumut.

Railway telegraphs and allied services.—The Federated Malay States Railway Department's telegraph, telephone, block and tablet signalling systems and other miscellaneous apparatus were maintained in a satisfactory condition throughout the year under the supervision of the Posts and Telegraphs Department's Engineers. The Railway Department's telephone exchanges at Kuala Lumpur and Port Swettenham were closed on the 29th February, 1936, telephone service being provided on and from that date by direct connections to the public exchanges.

Works carried out during the year included the re-wiring of the station and hotel buildings in Kuala Lumpur and re-arrangement of the through block section working in Perak.

Telephones.—The number of telephones in service continues to increase and at the end of the year under review 4,619 direct exchange lines were connected to the Federated Malay States telephone system as compared with 4,223 at the end of 1935. Miscellaneous electric signalling equipments, such as fire alarms and private bells are also rented to the public by the Department and the number of such items in use at the close of the year was 610.

The nett revenue derived from telephones during the year was $1,038,238, an apparent decrease of $30,742 as compared with 1935. This apparent decrease was due to a reorganisation of the telephone accounting system involving collection of rentals for shorter periods in advance. There was in fact an increase in revenue. Included in the 1936 revenue figure above is $450,349 derived from trunk and junction services, representing an increase of $27,711 over the previous year.

The Department now maintains 84 telephone exchanges for public service. There are three general types, namely—

(*a*) Fifty-eight manual exchanges. All switching at these exchanges is performed by operators.

(*b*) Seventeen full automatic exchanges. Subscribers connected to these exchanges obtain their own local connections by dialling, and have access to an operator (usually at a remote exchange) for trunk and junction calls.

(*c*) Nine semi-automatic exchanges. Connections on these exchanges are set up by an operator at a remote exchange, to which the apparatus routes all calls. Subscribers are not provided with dialling devices and this type of working is practicable only at very small exchanges up to 10 lines.

During the year four new telephone exchanges were provided to open up service in rural areas. Of these one was full automatic, three semi-automatic. Two full automatic exchanges were converted to an improved type which provides facilities for dialling numbers on remote exchanges, and for dialling through one exchange of this type to another connected "in tandem".

A new type of rural semi-automatic exchange equipment, using relays only for making the necessary connections, was also introduced for sparsely populated areas. It has a capacity of 10 lines and requires to be connected to a "parent" manual exchange through which all calls pass.

The installation of C.B. 10-type manual exchange equipment at Seremban to replace the old exchange, which has seen many years of service, was commenced towards the end of the year.

Owing to the opening of the new exchanges mentioned above, and to general increase of traffic it was necessary to provide the following trunk and junction circuits during the year:

Bidor-Tapah	1 channel
Batu Kurau-Taiping	1 ,,
Klang-Port Swettenham	2 channels
Kuala Lumpur-Klang	2 ,,
Ampang-Kuala Lumpur	2 ,,
Ipoh-Sungei Siput	1 channel
Tampin-Malacca	1 ,,
Parit Buntar-Nebong Tebal	1 ,,
Kuala Lumpur-Kuala Kubu	1 ,,
Ipoh-Kuala Kangsar	1 ,,
Taiping-Bagan Serai	1 ,,
Ipoh-Sitiawan	2 channels
Bruas-Taiping	1 channel
Bruas-Sitiawan	1 ,,
Tampin-Tebong	1 ,,
Rompin-Bahau	1 ,,
Utan Melintang-Sabak Bernam	2 channels

Radio telephone services continued in operation between Malaya and—

(*a*) Java, Madoera and Bali.

(*b*) Philippine Islands. Zones I, II and III.

(*c*) North Sumatra.

(*d*) Macassar (Isle of Celebes).

(*e*) Siam (Bangkok only).

Preliminary arrangements were continued for a radio-telephone service from Malaya to Great Britain and other European countries via Java.

Wireless.—The wireless stations in Selangor, Pahang, and Upper Perak maintained satisfactory short wave services and operated efficiently throughout the year under review.

The number of messages dealt with was 54,816 compared with 43,406 in 1935 an increase of 26 per cent.

Aeronautical services continued to be operated from the Petaling Hill Wireless Station, and during interruptions to the normal telegraphic communication with Singapore and Penang communication was maintained through this station.

Radio telephone services are carried out from Petaling Hill and the particulars of these services appear under the section relating to telephones.

Radio telephony tests with Saigon in French Indo-China continued throughout the year and arrangements were made for a public service to commence on the 4th January, 1937.

Broadcasting on behalf of the Malayan Amateur Radio Society was also carried out from the Petaling Hill Station. Programmes were as a general rule radiated thrice weekly.

The number of Broadcast Listeners Licences in force at the end of the year was 2,459 as compared with 1,589 in 1935. The number of wireless dealers licensed was 53.

Electrical interference with broadcast reception continued to occupy the attention of the Department. The majority of complaints again originated in areas served by direct current supplies where small electrical machines are the chief source of interference.

Financial.—The nett revenue collected during 1936 by the Posts and Telegraphs Department in the Federated Malay States was $3,028,992. This is an increase of $151,167 compared with the corresponding figure in 1935 (with Federal reimbursement included). Annually recurrent charges including personal emoluments amounted to $2,395,972 against $2,331,386 in the previous year, an increase of $64,586. Special expenditure amounted to $36,643 against $129,430 in the previous year, a decrease of $92,787. Expenditure on loan account amounted to $362,215. No expenditure on loan account was incurred during the preceding year. The total of special expenditure and expenditure on loan account in 1936 amounted to $398,858 which is greater by $269,428 than the total of special expenditure in 1935. These revenue and expenditure figures do not include the value of services rendered free of charge by the Posts and Telegraphs Department.

RAILWAYS.

The Railways of Malaya, which are such a vital factor in the communications of this country, are owned by the Federated Malay States Government, except for the portion in Johore which is held on lease from that State.

Starting in the south at Singapore and going northwards the line traverses the Island of Singapore, leaving behind its masses of shipping, the Naval Base and what will be one of the most commodious and up-to-date Air Ports in the world and itself an important link in the communications of the Empire.

Crossing the Straits of Johore to the mainland on a causeway which also carries a road, the line continues through the State of Johore passing through large areas of jungle alternating with pineapple, rubber and oil-palm plantations until at the 136th mile from Singapore it enters the Federated Malay States territory at Gemas in the State of Negri Sembilan.

From Gemas one line runs north through a very interesting country of wonderful forests, fast flowing rivers and great mountains until eventually it reaches Tumpat, a port on the China Sea in the Unfederated State of Kelantan. A small branch line breaks off at Pasir Mas and runs to Sungei Golok on the Siamese border which is connected by rail with Bangkok, the capital of Siam.

The main line from Singapore to Penang runs west and north from Gemas, leaving the well-known historical town of Malacca on its left and onwards through Seremban to Kuala Lumpur, the Federal Capital—a real Garden City. From this point various lines radiate, the main one to the north passing through Ipoh, the surrounding district of which is the richest tin-bearing area in the world, and then on through Taiping to Prai, the port opposite Penang Island. A few miles south of Prai another line deviates to the Siamese border, passing through the Unfederated States of Kedah and Perlis. At the border station Padang Besar, connection is made with the Royal State Railways of Siam, and it is over this line that the express trains run from Penang to Bangkok.

The entire journey over the Federated Malay States Railways is of great interest, tropical verdure and plantation intermingling with tin mines, many of which are operated by huge dredges looking like ocean steamers in the distance. The native population adds charm to the views by the wonderful varieties of colours in their costumes, the shades of which never clash.

Journeys are made as comfortable as in any other part of the world by the provision of restaurant cars, modern and tastefully decorated buffet cars incorporating the latest ideas in seating accommodation, air-conditioned first class coaches and commodious and well-appointed sleeping saloons.

By various branch lines the main line is connected to ports on the west coast of the country, the chief of which is Port Swettenham in the State of Selangor which has been transformed from an area of mangrove swamps and muddy rivers into a thriving port where ocean steamers can come alongside the well-equipped wharves.

In common with many railways throughout the world the Federated Malay States Railways have been faced with intense competition from road traffic and have built up a system of road distribution from all important stations, in addition to which they have connected up many outlying districts to the railway by means of regular road transport. Services by motor cars to and from the hill stations in Malaya are operated by the railway in conjunction with their train services.

Below are given certain statistics regarding the Federated Malay States Railways and the traffic handled:

MILEAGES, MAIN LINES AND BRANCHES.

	Miles.
Singapore-Prai	488
Gemas-Tumpat	328
Pasir Mas-Sungei Golok	13
Tampin-Malacca	21
Seremban-Port Dickson	25
Sungei Besi-Sultan Street	8
Sultan Street-Ampang	6
Kuala Lumpur-Port Swettenham	27
Kuala Lumpur-Batu Caves	8
Kuang-Batang Berjuntai	14
Tapah Road-Teluk Anson	18
Ipoh-Tronoh	15
Taiping-Port Weld	8
Bukit Mertajam-Padang Besar	99
Padang Besar-Bangkok (Royal State Railways of Siam)	615

LENGTH OF LINE (FIRST TRACK).

In the Federated Malay States	614
In the Straits Settlements	98
In the Unfederated Malay States	356
	1,068

Item.	1936.	1935.	1934.
Length of line (first track), miles...	1,068	1,068	1,068
Gauge	Metre	Metre	Metre
No. of permanent stations ...	213	213	214
No. of flag stations	80	77	72
	$	$	$
Expenditure on Capital Account on 31st December:	227,379,154	235,249,526	235,288,207
From Loan Funds	50,036,123	49,834,323	49,735,103
From Revenue Advances ...	113,936,593	113,934,121	114,072,024
From Railway Revenue ...	63,406,438	71,481,081	71,481,081
Gross Receipts	13,086,733	11,871,097	11,284,147

Item.	1936.	1935.	1934.
	$	$	$
Expenditure chargeable to Revenue Account (excluding Renewals Fund Contribution)	10,312,376	10,097,340	9,709,390
Contribution to Renewals Fund	1,927,045	1,773,757	1,574,757
Expenditure on Capital Account	220,363	99,270	17,540
Expenditure from Renewals Fund	771,179	737,683	435,883
Balance of Renewals Fund on 31st December	11,676,571	8,514,237	7,478,164
Receipts from passenger train traffic	4,423,840	4,431,386	3,958,677
No. of passengers (exclusive of season tickets)	6,877,055	6,137,540	5,498,159
No. of season tickets	12,106	11,429	11,230
Receipts from goods train traffic	6,470,430	5,269,786	5,256,109
Tons conveyed :			
(*a*) Revenue Earning	1,666,631	1,302,465	1,202,997
(*b*) Departmental	236,608	210,689	199,987
Receipts from road motor collection and delivery services	190,077	160,148	144,219
Receipts from miscellaneous services (rents, docks, ferries, etc.)	2,002,386	2,009,777	1,925,142
No. of ocean steamers dealt with at Port Swettenham	1,066	983	886

ROADS.

The road system of the Federated Malay States comprises a total of 2,964 miles of which 2,055 miles or 69.67 per cent., are bituminously treated. The provision for maintenance was in general increased following the general improvement is financial conditions and totalled $2,171,685. The average cost of maintenance was $715 per mile as compared with $691 in 1935 and $566 in 1936.

It is to be remembered that a large proportion of the roads in Malaya were laid out for bullock or horse vehicle traffic when consideration of gradient was of primary importance and alignment was a secondary matter. The advent of mechanical transport has altered this, and though annoyance may be felt at the apparently poor alignment of some of the roads motorists might nevertheless admire the ingenuity of the engineers and surveyors who had to lay out the roads in dense jungle to a gradient not exceeding one in forty (1 in 40).

The main trunk road from Penang to Singapore has a bituminously treated surface throughout and for the major portion of the way is a good motor road.

SHIPPING.

The number and tonnage of merchant vessels entered and cleared at Port Swettenham during the last three years were as follows:

	No. of vessels.		Tons.
1934	2,873	...	6,378,361
1935	2,865	...	6,670,985
1936	2,961	...	6,944,778

The number and tonnage of ocean-going steamers entered and cleared at this port were as follows:

	No. of vessels.		Tons.
1934	1,869	...	5,882,621
1935	1,945	...	6,165,547
1936	2,053	...	6,481,844

The number of ocean-going steamers which came alongside the wharf was 380 against 334 in the previous year. The largest vessel entering the port of Port Swettenham during the year was the Blue Funnel s.s. "Philoctetes" of 11,446 tons. The vessel with the deepest draught was the Blue Funnel s.s. "Calchas" drawing 31′ 1″.

The following table shows the nationality, number and tonnage of ocean-going merchant vessels entered and cleared at Port Swettenham during 1936:

Nationality.	Entered.		Cleared.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
American	11	39,044	11	39,044	22	78,088
British	627	2,245,431	626	2,242,655	1,253	4,488,086
Chinese	5	6,945	5	6,945	10	13,890
Danish	40	161,092	40	161,092	80	322,184
Dutch	121	233,655	121	233,655	242	467,310
French	3	6,860	3	6,860	6	13,720
German	49	221,892	49	221,892	98	443,784
Italian	1	3,708	1	3,708	2	7,416
Japanese	49	202,694	49	202,694	98	405,388
Norwegian	117	117,837	117	117,837	234	235,674
Siamese	4	3,152	4	3,152	8	6,304
	1,027	3,242,310	1,026	3,239,534	2,053	6,481,844

A reduction of 5 per cent. on all pilotage fees was in effect throughout the year.

AIR SERVICES.

The aeroplane landing ground, Taiping, continues in very good condition and was used by 220 aircraft during the year compared with 184 during 1935.

The emergency landing ground at Simpang Ampat, a rectangle measuring 1,000 yards by 300 yards was completed at a total cost of $24,959 but was not declared open pending consolidation of the earthwork and the complete grassing over the area.

The landing ground at Ipoh was completed at a total cost of $74,839 and in August was declared open for light aircraft not exceeding 2,500 pounds laden. An office, store and coolie lines have been erected; a petrol pump is available. The ground has two runways 700 yards by 200 yards and 600 yards by 300 yards respectively, and is regularly used by the Perak Flying Club which has erected a club house and hangar.

The work of conditioning an area of 600 yards by 180 yards on the Kuala Lumpur Aerodrome was completed satisfactorily and this landing ground is now licensed for aircraft up to 5,000 pounds gross weight. The landing area has been used by the Kuala Lumpur Flying Club throughout the year and in addition private aeroplanes, Penang, Singapore and Perak Flying Club planes and Royal Air Force machines have made use of the ground.

The Air Ministry decided, with the agreement of the Government of the State of Selangor, to provide the necessary funds to condition two runways on the Port Swettenham landing ground and to this end a sum of $177,000 was put at the disposal of the Department of Public Works. The scheme which was prepared jointly by the Superintending Engineer, Royal Air Force, Far East, and by the Public Works Department provided for laying 12 inches of consolidated laterite gravel over two areas each 700 yards by 120 yards and so make two runways in the shape of a letter "L" in the direction of the prevailing winds. The scheme provided for suitable drainage and doming of the existing formation and also for providing a water-proofed surface of bituminous treated laterite metal on the NE-SW runway. Work commenced in April, 1936; the method of execution being by direct labour, contractors being employed for the supply of the necessary laterite gravel and metal. At the close of the year 80 per cent. of the work was completed and an expenditure of $153,000 incurred. It is hoped that when the work is completed in May, 1937, it will be possible for all types of aircraft to land at the Port Swettenham Aerodrome in all weathers.

The Kuantan River provides excellent alighting and take-off facilities for flying-boats of the largest types. Permanent moorings for flying-boats and sea-planes have been established in the river and these are used by the flying-boats of the Royal Air Force whenever they visit.

CHAPTER XI.

Banking, Currency, Weights and Measures.

BANKING.

The principal banks doing business in the Federated Malay States are as follows:

Chartered Bank of India, Australia and China—six branches.

Hong Kong and Shanghai Banking Corporation—two branches.

The Mercantile Bank of India Limited—four branches.

There are no agricultural or co-operative banks in the Federation but agricultural and building loans are granted by the Planters' Loans Board—a Government institution with a capital of $4,000,000.

CURRENCY.

The standard coin is the Straits Settlements dollar with a par value of two shillings and four pence.

Currency notes issued by the Straits Settlements Currency Commissioners together with the Straits Settlements silver dollar and fifty-cent piece are legal tender to any amount throughout the Federation.

WEIGHTS AND MEASURES.

Under Enactment 16 of 1921 the standard weights and measures are:

(i) The Imperial standard pound.
(ii) ,, ,, yard
(iii) ,, ,, gallon.

Other weights in common use are:

10 huns ... ... =1 chi
10 chi ... ... =1 tahil (1⅓ oz.)
16 tahils ... ... =1 kati
100 katies ... ... =1 pikul (133⅓ lbs.)
40 pikuls ... ... =1 koyan

CHAPTER XII.

Public Works.

The Public Works Establishment consists of the Adviser, Public Works, who is Director, Public Works, Straits Settlements, and has headquarters in Singapore, four State Engineers, nine Senior Executive Engineers and 27 Executive and Assistant Engineers with a subordinate staff of Technical Assistants and Overseers who are recruited through a system of apprenticeship.

The authorised provision for Public Works and Personal Emoluments was $8,829,535 of which $7,442,165 was spent under the heads shown below:

—	1936.		1935.	
	Provision.	Expenditure.	Provision.	Expenditure.
	$	$	$	$
Annually Recurrent ...	3,923,188.00	3,839,396.13	3,854,994.60	3,777,964.79
Other Charges and Personal Emoluments ...	1,216,048.00	1,147,072.08	220,124.40 (excluding Personal Emoluments)	196,747.69
Special Services ...	3,402,633.77	2,251,014.07	1,801,668.55 (including Loan and Revenue Account)	1,506,487.76
Loan and Revenue Account	287,665.43	204,683.42		

In addition to the above a sum of $337,135 was spent on works carried out for other departments making a total of $7,779,301. The expenditure was 84.28 per cent. of the provision and the cost of administration was 13.80 per cent. of the amount spent.

The comparative percentages of expenditure to authorised provision for the last three years were:

	1936.	1935.	1934.
(*a*) Annually Recurrent ...	97.87 ...	98.0 ...	95.5
(*b*) Other Charges	94.33 (including P.E.) ...	89.4 ...	84.0
(*c*) Special Services ...	66.15 ...	83.6 ...	47.5 (including Loan and Revenue Account)
(*d*) Loan and Revenue a/c	71.15		

The funds provided for maintenance of buildings were not sufficient to permit of any great reduction being made in the arrears of maintenance left over from the depression period during which the provision was only sufficient to carry out maintenance necessary for the safety of the buildings. There are 14,421 buildings of a total value of $85,161,000 to be maintained and the expenditure on maintenance was $991,900 or 1.16 per cent. of the capital value. This shows a slight increase on the figures for 1934 and 1935 which were .863 and .995 per cent. respectively.

Out of a total provision of $3,402,633 for Special Services $2,251,014 or 66.15 per cent. was expended. There is only one scheme of major importance in hand, namely, the accommodation for the Malay Regiment, Port Dickson. The estimated cost of this work is $1,400,000 of which $573,714 was spent during the year. Very satisfactory progress was made in spite of the difficulty of obtaining delivery of materials from Europe.

Two interesting innovations were adopted during the year. The plans for the new strong rooms for the Federal Treasury, Kuala Lumpur, provide for air conditioning and the plans for the Seremban Abattoir include an electric lethaler in the pig slaughter-house.

Good progress was made in the extension of the Sungei Buloh Leper Settlement, 46 houses being completed. A start was made on the new market for the Kuala Lumpur Sanitary Board which is estimated to cost $310,000. The building is so designed that the roof can form the floor of an extra storey and so provide for the future extension of the market which owing to the limitations of the site cannot be extended at ground level.

Water supplies have been maintained in an efficient manner during the year. There was no shortage and the regular analyses of samples showed satisfactory results. There are 41 water supplies in the Federation and full statistics are available for 27 of these. The capital value of these 27 supplies is $17,947,666. During the year 6,531 million gallons were supplied and a nett revenue of $1,012,354 over the cost of upkeep was collected. This is 5.64 per cent. of the capital cost, but it must be remembered that there are capital and overhead charges to be deducted from the gross profit.

A new steel concrete lined syphon with six ball and socket joints 320 feet long was floated across the Kinta River at Parit Buntar on steel pontoons and successfully sunk in position.

Further progress was made on the New Kinta District Water Supply which had been suspended during the depression period. Improvements were undertaken to the Lumut, Kuala Kangsar, Tapah and Bagan Serai Water Supplies. A start was made on three new water supplies in Parit, Enggor end Selema. The new purification plant at Kuala Pilah was completed and analyses showed that the filtrate was up to a very satisfactory standard.

The gradual elimination of old fashioned methods of sanitation by the construction of septic tanks for all new quarters and the provision of them for older quarters was continued but the position is still far from the standard desired.

During the year the Government Factory carried out major repairs to Government plant and motor lorries as well as fabricating the structural steelwork for some bridges and buildings.

A further contribution to technical literature was made by the Public Works Department during the year by the publication of a "Report on Modern Sewage Treatment" by Mr. A. G. Cooke, B. ENG., A.M.INST.C.E., an Executive Engineer in the department. The publication received very striking praise from the Technical Press in England, and there is a growing demand for copies from various parts of the world.

DRAINAGE AND IRRIGATION.

Krian Irrigation.—The planted area remained about the same as in the previous year at 49,118 acres, but the yield estimated at 17¼ million gantangs is not as good mainly due to weather conditions during the tillering period.

The cost of maintenance during the year was $60,817 embracing the upkeep of:

Irrigation reservoir and headworks;
48.5 miles of canals;
252.5 miles of distributaries;
261 miles of drain;
283 water-gates and regulators;
103 syphons; and
68.3 miles of bund

together with many items of the works newly constructed, mainly 10 new syphons and 10 new water-gates, 393 chains of drains, 559 chains of distributaries and 340 chains of bund in the Kurau Forest Reserve.

Revenue for the year amounted to $130,666 and is the highest on record, being $7,190 higher than in the previous best record year of 1923. The excess of revenue over the year's expenditure is $33,784 which clearly reflects the measure of prosperity returning to the Krian cultivators.

Under Capital Account there are additions amounting to $153,520 on account of expenditure on the Krian extension scheme, Kurau Forest Reserve bund and surveys and investigations.

Krian Extension Scheme.—The scheme embraced the diversion of the dry weather flow of the Sungei Ijok by means of a canal four miles long into the Merah watershed and thence to the reservoir. The increased supply was calculated to meet the needs of the cultivators in the Sungei Acheh area of Province Wellesley adjacent to the Perak boundary, a new area of 3,000 acres in the Kurau Forest Reserve, and 750 acres near Bukit Merah. The proposed increased supply also provided better control over higher lands in the existing area of which some 2,000 acres were estimated to benefit. The area irrigated would therefore be increased from 50,000 to 60,000 acres.

The scheme which was estimated to be completed in three years at a cost of $375,000, half of which sum is contributed by the Government of the Straits Settlements, was nearing completion at the end of the year.

The concrete structures comprising a diversion dam and intake works costing $26,014, a flume across the Sungei Segar, $6,183, and various cross drainage culverts were all put in hand in 1936 and completed within the year.

The Krian Coastal Bund extends from the Perak-Province Wellesley boundary to Kuala Kurau and is approximately 12 miles in length. The bund traverses mangrove forest throughout its length and protects from inundation by the sea, an area of 3,000 acres at present in forest for conversion into padi land. A sum of $42,500 has been provided for its construction and will be recovered by premia on the land reclaimed. Approximately 84,000 cubic yards of bund had been made by the end of 1936.

The extension of irrigation to the area of 3,000 acres was completed in 1936.

A plan for the settlement of the area was completed during the year and sent to the Land Office.

The new capital works executed for the Krian scheme from 1932 to 1936 have cost in all in round figures $600,000. Infinite pains have been taken both in their design and construction and the year 1937 should see them all in full operation in a manner convincing of their utility and lasting endurance.

Sungei Manik Irrigation Scheme.—The irrigation of an area in virgin jungle is novel in that there is no previous experience of the kind. Irrigation has to be provided in advance of settlement to ensure crops from the first year of occupation. The whole of the investigations have therefore to be conducted in the jungle and with a limited staff and the measure of success of these methods is indicated by the progress made to the end of 1936 which is as follows:

	Total length completed in miles. 1932-1936.	Length completed in miles. 1936.
Main irrigation canals (*tali ayer*) ...	40 ...	2
Distributary irrigation canals ...	18 ...	4½
Main drains	10 ...	2
Total ...	68 ...	8½
Bunds total ...	14 ...	6

There was thus a total of 68 miles of canals and drains and 14 miles of bunds completed in the area at the close of the year.

The acreages alienated and planted are as under:

Area of land alienated on 31st December, 1936 (on title and T.O.L.)	6,494 acres
Area of land planted with padi on 31st December, 1936	4,633 ,,

Total capital expenditure to 31st December, 1936, is $226,994.

Total acreage served by the irrigation works—$8,028. Capital cost per acre at 31st December, 1936—$28.

The maintenance work was done by an entirely Malay labour force recruited from amongst the bendang owners. The task work system was followed as much as possible and a high standard of maintenance was obtained.

The planted area for the 1936-1937 season is approximately 60 per cent. greater than that of the previous year and a good crop averaging about 400 gantangs per acre is expected.

In spite of the unusually dry conditions prevailing in the first four months of the irrigation season a plentiful supply of water was available for the first stage area and irrigation was everywhere satisfactory.

The area is proving very popular with Malays and there is no lack of applications for land. The change in the scene in the five years of construction is remarkable; vast stretches of swampy jungle have been converted into thriving rice fields with a resident Malay population now in excess of 5,000; access paths have been made, schools erected and with the co-operation of all Government departments what appears to be a model settlement for an agricultural population is in course of evolution.

Except for a control gate and some small works construction of first and second stages, as planned, is now complete. The expenditure for the year was $80,859.

The lower second stage bund along the Batang Padang River was completed and the machine transported on pontoon by water to the north boundary of the first and third stages where construction on the Lampam bund was commenced. In the last two months it had very difficult work in a flooded area, the water being at times over the wheel-race. The main canal and distributaries for the lower second stage along with the drainage was completed with the exception of the outfall gate.

The Chikus distribution weir controlling the supply to the lower second stage was completed and also a supply known as *Tali Ayer* No. 4 to Tukang Sedin bendangs, and portions of the lower second stage from first stage headworks were completed.

Construction costs were rising all year and latterly it became difficult to get contractors to tender for work; presumably work on estates and tin mines is more attractive.

In all 80,765 cubic yards of earthwork was completed during the year and of this 61,767 cubic yards was placed by the dragline excavator.

Pumping Schemes, Perak Riverine Areas.—The Bota pumping scheme functioned for its second season and a satisfactory supply was maintained. Pumping for the crop commenced on 15th July, the plant running for 24 hours per day. Supply was continuous till 16th December except for stops for minor adjustments and periods when rainfall was sufficient. No further pumping was required after 16th December as the supply was sufficient for the crops.

The dry weather of May-August produced very thirsty land, especially in the lower bendangs and preliminary saturation took a long time.

The crop is expected to be good on a planted area of 1,730 acres.

The pumped supply for the second scheme at Pulau Tiga was started by the Raja Muda on the 29th October. One thousand and seven hundred acres were planted, dependent mostly this year on direct rainfall.

At the end of the year the main canal was complete for a length of some six miles.

Bruas Irrigation Area.—The dam and *tali ayer* constructed in 1935 functioned satisfactorily. At the end of the year's irrigation supply which lasted from May to December, there was no accumulation of silt either above the dam or in the *tali ayer* and apart from some minor repairs to pitching no expenditure need be incurred. An abundant supply was available to the 500 acres in the area.

No departmental expenditure was incurred other than the wages of a water gate keeper who also patrols the *tali ayers*. Maintenance was carried out by the raiats themselves and the system worked fairly well, though *tali ayer* clearing left something to be desired.

The area under cultivation at Bukit Gantang amounts to some 2,400 acres and this is served by a catchment of some 26 square miles, consisting of small streams coming down from the main range and foothills.

Two more dams were constructed in 1936. The Kampong Pauh dam, completed in 1935 cost $6,000 and the cost of the works undertaken in 1936 will be $20,000, making a total expenditure in the area of $26,000 or approximately $11 per acre.

Controlled Drainage Scheme, Panchang Bedina Padi Area.—The controlled drainage works constructed during the years 1932-1936 at a cost of $250,000 comprise:

12½ miles of main drain;
41½ " subsidiary drain;
4 main outlet control gates;
20 subsidiary control gates;

for an area of 17,000 acres.

Assets and Liabilities.—The following statement shows the assets and liabilities on the 31st December, 1938:

GENERAL BALANCE SHEET, 31ST DECEMBER, 1938.

LIABILITIES.		$ c.
Capital Account (4½ per cent. Federated Malay States Local Loan, 1959), Balance at credit thereof (*a*)		1,732,764 80
Due to other Governments—		
Burma (Agency Account) ...	$ 474.47	
India (Agency Account) ...	184,084.30	
India (Current Account) ...	17,529.56	
Brunei (Current Account) ...	6.00	
Kedah (Current Account) ...	251.51	
Malacca (Current Account) ...	7,757.87	
Sarawak (Current Account) ...	2.50	
		210,106 21
Sundry Outstanding Accounts		500,414 39
Family Remittances		1,850 71
Suspense—General		3,035 08
Deposits—		
Courts	$172,294.14	
Forests	283,124.34	
Lands	370,040.07	
Postal	208,079.76	
Postal Account Stores, Colony	300,000.00	
Postal Account Stores, Kedah ...	70,000.00	
Postal Account Stores, Kelantan	5,000.00	
Planters' Loans Board	600,000.00	
Miscellaneous ...	1,054,245.13	
		3,062,783 44
Sungei Buloh Cash Coupon Reserve Account		1,000 00
Sundry Funds—		
Bankruptcy Estates, Kuala Lumpur ...	$178,010.47	
Bankruptcy Estates, Perak	118,138.81	
Police Fine and Reward Fund ...	51,706.48	
Public Officers' Guarantee Fund	452,930.89	
Phillips' Agricultural Scholarship Fund ...	5,637.11	
Rembau Waris Fund	105,424.26	
Miscellaneous ...	33,330.92	
		945,178 94
Carried forward ...		6,457,133 57

ASSETS.		$ c.
Cash—		
In Treasuries and Banks ...	$15,129,927.64	
In Agencies	77,094.49	
In Transit	37,453.63	
Fixed Deposits	8,277.43	
Joint Colonial Fund (Crown Agents)	23,108,571.43	
		38,361,324 62
Cash in Funds (Crown Agents)—		
Special Reserve Fund	$194,377.93	
Opium Revenue Replacement Reserve Fund	32,529.89	
		226,907 82
Investments—Surplus Funds—		
Sterling Securities	$15,376,851.07	
Perak River Hydro-Electric Power Co. Ltd. Shares	165,736.61	
Dollar Securities	3,034,575.00	
Rupee Securities	978,750.00	
		19,555,912 68
Investments—Special Reserve Fund—		
Sterling Securities	$16,804,332.68	
Perak River Hydro-Electric Power Co. Ltd. Shares	662,946.43	
Loan to Siamese Government (*b*)	21,752,536.79	
		39,219,815 90
Investments—Opium Revenue Replacement Reserve Fund—		
Sterling Securities	$22,505,852.64	
Perak River Hydro-Electric Power Co. Preferential Shares	7,285,714.29	
		29,791,566 93
Investments—Specific Funds—		
Bankruptcy Estates, K. Lumpur	$ 98,946.00	
Do. Perak ...	73,115.43	
Police Fine and Reward Fund ...	40,749.38	
Public Officers' Guarantee Fund	438,232.84	
Phillips' Agricultural Scholarship Fund	5,564.00	
Rembau Waris Fund	95,088.00	
		751,695 65
Carried forward ...		127,907,223 60

(*a*) The F.M.S. 4½ per cent. Local Loan, 1959, appears on the credit side of the Capital Account (*vide* Appendix C). The expenses of the issue and expenditure on works authorised to be carried out appears on the debit side of the same account, the loan being repayable by Sinking Fund, the instalments of which are provided out of revenue.

(*b*) Repayment of the loan of $39,685,714.30 by 26 yearly instalments commenced on 1st January, 1924.

NOTE:—

(i) The F.M.S. 3 per cent. Sterling Loan, 1960-70 of £4,000,000 ($34,285,714.29) raised for the purpose of redeeming the 4½ per cent. Straits Settlements Sterling Loan, 1935-45 of £4,200,000 appears on the credit side of the Capital Account (*vide* Appendix B). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

(ii) The F.M.S. 3 per cent. Local Loan, 1956-66 of $15,000,000 raised to meet the deficiency in the Sinking Fund for the redemption of the Straits Settlements 6 per cent. Sterling Loan on the optional date appears on the credit side of the Capital Account (*vide* Appendix D). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

GENERAL BALANCE SHEET, 31ST DECEMBER, 1938—(*cont.*)

LIABILITIES.		$ c.
Brought forward ...		6,457,133 57
Electrical Dept. F.M.S. Renewals Fund		5,301,116 00
Posts and Telegraphs F.M.S. Renewals Fund...		4,623,878 55
Opium Revenue Replacement Reserve Fund		29,824,096 82
Special Reserve Fund		39,414,193 83
General Revenue Balance—		
Balance on 1st January, 1938...	$85,880,937.39	
Less Surplus and Deficit Account, 1938	38,530,945.37	
	$47,349,992.02	
Less Depreciation of Investments, 1938 ...	806,056.86	
Balance on 31st December, 1938	$46,543,935.16	
		46,543,935 16
		132,164,353 93

ASSETS.		$ c.
Brought forward ...		127,907,223 60
Advances—		
Due by other Governments ...	$51,397.31	
F.M.S. Railways	53,890.49	
Bentong Tailings Retention Scheme (*a*)	137,116.06	
Tin Bonded Stock	51,079.21	
Purchases, Tin Buffer Stock Scheme	655,151.82	
Advances, Tin Buffer Stock Scheme	687,444.50	
Buffer Stock Administration Charges	375.00	
Other	350,752.25	
		1,987,206 64
Imprests		92,530 44
Loans—		
Kelantan	$300,000.00	
Planters	759,107.38	
War Service Land Grant Scheme	575,245.61	
Miscellaneous...	543,040.26	
		2,177,393 25
		132,164,353 93

(*a*) The advance to be charged to expenditure in 1939.

NOTE:—

(i) The F.M.S. 3 per cent. Sterling Loan, 1960-70 of £4,000,000 ($31,285,711.29) raised for the purpose of redeeming the 4½ per cent. Straits Settlements Sterling Loan, 1935-45 of £4,200,000 appears on the credit side of the Capital Account (*vide* Appendix B). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

(ii) The F.M.S. 3 per cent. Local Loan, 1956-66 of $15,000,000 raised to meet the deficiency in the Sinking Fund for the redemption of the Straits Settlements 6 per cent. Sterling Loan on the optional date appears on the credit side of the Capital Account (*vide* Appendix D). The loan is repayable by Sinking Fund, the instalments of which are provided out of revenue.

Railways.—The result on the year's working after allocation of $2,086,216 from revenue to the Renewals Fund and exclusive of the direct contribution of $1,000,000 to the fund from the general Government revenue, showed a surplus of $116,481. The balance to the credit of the Renewals Fund on 31st December, 1938, was $17,028,928 as compared with $16,233,249 on the 31st December, 1937.

Loan to Siam.—The loan to the Siamese Government of £4,630,000 ($39,685,714) which is repayable by 26 annual instalments commencing on the 1st January, 1924, stood at $21,752,537 on 31st December, 1938, having been reduced by the payment of the fifteenth instalment due on 1st January, 1938. This sum together with a portion of the Surplus Funds making up a total of $25 million was transferred as contribution to the Special Reserve Fund on 1st July, 1938.

Loan to Kelantan.—The loan of $300,000 made to Kelantan in 1930 remained unsettled on 31st December, 1938.

Loans—Planters, War Service, etc.—The total amount of Planters and War Service loans outstanding on 31st December, 1938, was $1,334,353 against $1,455,946 on 31st December, 1937.

Other Loans.—Miscellaneous loans outstanding on 31st December, 1938, amounted to $543,040 compared with $630,732 on 31st December, 1937.

Surplus.—The surplus on 31st December, 1937, was $85,880,937. As the expenditure for the year not excluding the extraordinary expenditure referred to elsewhere exceeded the revenue by $38,530,945, the surplus was decreased to $47,349,992 on 31st December, 1938.

A sum of $806,057 being depreciation of Surplus Funds investments on annual valuation, which was excluded from the Revenue and Expenditure Account, was made a direct charge to surplus, thus it further reduced the surplus on 31st December, 1938, to $46,543,935, which is now termed as General Revenue Balance. This is in compliance with the instruction of the Secretary of State to exclude unrealisable appreciation and depreciation of investments in the annual budget, being an item which does not represent an actual cash transaction and which is not susceptible of legislative control.

The gross liquid assets in cash and easily realisable investments, exclusive of investments and cash in funds with the Crown Agents ear-marked for specific purposes, amounted to $57,917,237. After allowing for cash liabilities the net liquid assets were $52,211,799 at the end of the year as compared with the corresponding figure of $58,023,390 at the end of 1937.

The net liquid assets of $52,211,799 exceeded the General Revenue Balance of $46,543,935 by $5,667,864. This sum together with $4,257,130 locked up in advances, imprests and loans amounted to $9,924,994 which represent the assets required to discharge the liabilities of the Electrical Department and Posts and Telegraphs Renewals Funds.

Rubber Experimental Research and Propaganda Reserve Fund.—This fund which was created by an allocation of $2½ million in 1930 stood at $1,004,940 on 31st December, 1937. This sum was transferred by monthly instalments during the year to the Malayan Rubber Fund controlled by the Controller of Rubber to whom was entrusted the administration of the balance of this fund in accordance with a resolution of the Federal Council on 6th November, 1936.

Opium Revenue Replacement Reserve Fund.—This fund was started with $10 million provided out of revenue in 1925; with $9,828,503, representing contribution at 15 per cent. of annual revenue from chandu sales for the years 1926 to 1930, and with the accumulated interest from inception to 31st December, 1930, and for the years 1936 to 1938 stood at valuation on 31st December, 1938, at $29,824,097 as against $30,054,561 on 31st December, 1937.

The interest earned on this fund for the five years 1931 to 1935 was credited to revenue and contributions to the fund have been suspended since 1931.

The fund will be stabilized at $30 million in accordance with the instruction of the Secretary of State and in future years any sum in excess of the figure will be credited to revenue for allocation as contribution to the Special Reserve Fund.

Special Reserve Fund.—This fund was created with effect from 1st January, 1937, with a first contribution of $15 million from revenue, to give effect to the decision of the Secretary of State that a special reserve equivalent to a year's recurrent expenditure should be built up out of future surpluses.

A second contribution of $25 million consisting of $21,752,537 Siamese Loan Balance and $3,247,463 Surplus Funds was transferred on 1st July, 1938. The fund stood at $39,414,194 at the end of the year as the result of valuation of securities at middle market prices on 31st December, 1938.

Electrical Department, Federated Malay States Renewals Fund.—This fund which was created in accordance with the Federal Council resolution of 25th January, 1938, stood at $5,301,116 on 31st December, 1938, representing accumulated contribution of $4,544,582 up to 31st December, 1937, and the contribution for the current year of $756,534.

Posts and Telegraphs, Federated Malay States Renewals Fund.—This fund was created in accordance with the Federal Council resolution of 30th June, 1938, with a contribution of $4,413,042 representing accumulated total due up to 31st December, 1937. The current year's contribution amounted to $210,837 which brought the fund to $4,623,879 on 31st December, 1938.

Federated Malay States Sterling Loan Capital Account.—A statement of the 3 per cent. Sterling Loan Account is published as Appendix B to this report showing that the proceeds have been utilised for the redemption of 4½ per cent. Straits Settlements Sterling Loan.

Federated Malay States Local Loan Capital Accounts.—

(*a*) A statement of the 4½ per cent. Local Loan Capital Account is published as Appendix C to this report. Of the total proceeds of $15,640,000, expenditure on Railway, Electrical and Public Works accounted for $13,907.235 leaving a balance of $1,732,765 still available to meet capital expenditure in 1939 and subsequent years.

(*b*) A statement of the 3 per cent. Local Loan Capital Account is published as Appendix D to this report showing that the proceeds have been utilised for the redemption of the 6 per cent. Straits Settlements Sterling Loan.

A summary of the Customs Tariff will be found in Appendix E.

STAMP DUTIES.

Stamp duties are collected by means of adhesive stamps affixed, in accordance with a schedule to the Stamp Enactment, on certain specified documents, of which the more common are given below:

Agreement or contract.—25 cents.

Bill of exchange (except a cheque or bank note).—5 cents for every $100 of the amount or value of the money for which the bill or note is drawn or made.

Charge, agreement for a charge, bond, debenture, covenant, and bill of sale by way of security.—At rates graduated from 10 cents for an amount not exceeding $25 to $1 for every $500.

Cheque.—4 cents.

Conveyance, assignment, transfer or absolute bill of sale.—

(*a*) On sale of any property (except stock, shares and marketable securities).—At rates graduated from 50 cents where the consideration does not exceed $100 to $1.50 for every $250.

(*b*) Of any stock, shares or marketable securities.—Ten cents (or 30 cents in certain cases) for every $100 or part of $100 of the value thereof on date of the transfer.

Lease or agreement for lease of any land, house or other immovable property granted or made.—At rates varying according to rent, fine or premium payable and period.

Policy insurance:

Fire insurance.—25 cents per policy.

Life insurance.—10 cents for every $1,000.

Power or letter of attorney.—$3 for a general power.

Promissory note (except a bank note).—10 cents for every $100 or part thereof.

Receipt for any money or other property the amount or value of which exceeds twenty dollars.—4 cents.

Share certificate.—5 cents.

POLL TAX AND HUT TAX.

There is no poll or hut tax.

CHAPTER XVII.

Miscellaneous.

ELECTRICAL DEPARTMENT.

The year under review showed a substantial reduction in the total accounted units generated in the Federated Malay States as compared with 1937. The following table gives the comparative figures classified according to their prime movers:

State.		Water wheels.	Steam plant.	Oil driven.	Gas engine.	Total.
Perak	1938	210,573,683	20,636,414	20,210,262	—	251,420,359
	1937	215,572,982	128,124,830	31,001,714	—	374,699,526
Selangor	1938	11,714,394	80,677,004	7,077,915	—	99,469,313
	1937	13,212,218	100,082,406	10,584,847	—	123,879,471
Negri Sembilan	1938	—	—	2,588,156	11,250	2,599,406
	1937	—	—	2,207,517	64,464	2,271,981
Pahang	1938	6,560,113	—	15,355,809	—	21,915,922
	1937	6,140,224	—	13,978,812	—	20,119,036

The States most affected have been the tin producing States of Perak and Selangor. The decrease in each case being due to the restricted tin quota which was most felt during the latter half of the year.

The remaining two States, which are not so dependent on tin, show an increase in generated output.

Of the above total of 375,405,000 units generated during the year 303,909,332 units were generated by private concerns and the remaining 71,495,668 by Government stations.

The output for each State was as follows:

State.	Government supplies.	Private supplies.	Total.
Perak	2,374,454	249,045,905	251,420,359
Selangor	66,617,921	32,851,392	99,469,313
Negri Sembilan ...	2,000,698	598,708	2,599,406
Pahang	502,595	21,413,327	21,915,922
	71,495,668	303,909,332	375,405,000

The following are the accounted units consumed for mining purposes in the Federated Malay States:

State.	Tin.	Gold.	Coal.
Perak	214,111,339	—	—
Selangor	37,517,821	—	10,194,206
Pahang	15,144,122	6,072,320	—
Negri Sembilan ...	—	—	—

Government Installations, Federated Malay States, Selangor.—The Kuala Lumpur supply system suffered a sharp decline in generated output during the latter half of the year to the extent of over 19 million industrial units as compared with 1937. The domestic load, however, increased, and the number of consumers connected at the end of the year rose from 9,356 to 10,055.

The Bungsar Power Station extension scheme was started and the work was progressing satisfactorily at the close of the year. It is anticipated that the new 12,500 kilowatts generating set will be ready for test runs about the middle of 1939.

A large portion of the Kuala Lumpur central area was converted from direct to alternating current.

The programme of "Improvements to Street Lighting" by vapour discharge lamps was put in hand early in the year and one hundred and forty 250 watt high pressure mercury lamps were erected along the main thoroughfares of Kuala Lumpur.

In the Klang and Port Swettenham areas the load increased steadily during the year and the number of consumers rose from 1,410 to 1,497. The new 500 K.W. diesel set at the Klang Power Station was put into commission during the early part of the year.

Completion of the scheme for the electrification of the township of Kuala Kubu Bharu was prevented owing to delay in the arrival of the new generating plant. All the necessary buildings, transmission and distribution network, however, were completed. It is anticipated that this township will now have supply during the first quarter of the new year.

PERAK.

All stations in Perak showed a steady increase in load and number of consumers connected compared with the previous year as shown by the following table:

Stations.	Connected 1937.	Load K.W. 1938.	Number of Consumers.		Increase in Consumers.
			1937.	1938.	1938.
Ipoh	6,333	6,707	4,527	4,750	223
Taiping ...	2,339	2,373	1,985	2,044	59
Tanjong Rambutan	112	117	123	159	36
Tanjong Malim ...	102	129	123	184	61
Batu Gajah ...	338	348	433	449	16

PAHANG.

The consumption of electricity in the townships of this State is mainly for domestic purposes, the industrial load being negligible.

The four Government supplies, however, showed steady if slow development during the year.

Two new supplies will be connected during the new year, viz., Mentakab-Temerloh and Fraser's Hill; while Bentong, which at present receives bulk supply from the Tin Bentong No Liability Company, Limited, will have its own station.

Delay caused by armaments priority orders in England, prevented the completion of the Fraser's Hill and Bentong schemes. The necessary plant and materials, although ordered during the first quarter of the year, failed to arrive until December. At the close of the year plant for the Mentakab station had not arrived.

NEGRI SEMBILAN.

The Government supply areas of Negri Sembilan, viz., Seremban, Port Dickson and Gemas showed steady increases in load demand. The Port Dickson plant was increased owing to additional demand in the Military area.

Statistics prove that Seremban demand increases at an average rate of 7 per cent. per annum. This town, however, owing to its supply being at direct current, has reached its economical distribution limit, and a scheme will be considered for converting the supply to alternating current.

COMPANIES.

Companies incorporated in the Federated Malay States are termed local, and all other companies incorporated in Straits Settlements, British Empire and elsewhere, having places of business in the Federated Malay States, are termed foreign.

Local Companies.—Fifty-nine new companies were registered in 1938 with total nominal capitalisation $13,909,285 as compared with the corresponding figures 80 and 34 with $10,755,857 and $9,125,156 in 1937 and 1936 respectively.

The main objects of the 59 new companies are Agency (2), amusement and entertainment (2), charity (2), engineering (1), general merchants (4), gold mining (3), hotels (2), investments (3), motor transport (28), printing (1), rubber planting (4), tin mining (5) and tea planting (2).

Four hundred and seventy-two companies were on the registers at the end of the year.

Foreign Companies.—There were 31 new registrations during the year as compared with 15 and 23 in 1937 and 1936 respectively.

The main objects of the new companies are: attorneys and trustees (2), banking (1), building contractors (2), druggists and chemists (1), engineering (2), financiers (2), fire insurance (2), general merchants (6), insurance brokers (1), inn keepers (1), investments (1), life assurance (3), life and fire insurance (1), motor transport (1), motor insurance (2), oil (1), rubber planting (1) and tin mining (1).

Six hundred and ninety-six companies were on the Federated Malay States registers at the close of the year.

Seventy-eight insurance companies were on the registers at 31st December, 1938, of which 45 are transacting fire insurance only, 15 are doing life assurance, 11 are conducting both life and fire insurance and seven are underwriting insurance business other than life and fire insurance. All the 78 companies are foreign companies.

The 14 banks operating under Federal Secretary's Licence on 1st January, 1938, continued to operate throughout the year and one new bank "The Indian Overseas Bank Limited" received a licence.

Liquidation.—Twenty-two local companies were in voluntary liquidation on 31st December, 1938, and in the case of 10 proceedings commenced in 1938. At the close of the year, 3 companies were in compulsory liquidation, of which the orders of Court for two were made during the year, while the other prior to 1938. As to foreign companies, the 3 under voluntary liquidation on 1st January, 1938, were increased to 6 during the year.

Two thousand and sixty-nine documents concerning local companies and one thousand four hundred and forty-eight concerning foreign companies were registered.

Revision of the Companies Enactment.—The representative Committee appointed by Government for the above purpose held seven meetings during the year when a considerable portion of the Straits Settlements draft Ordinance was considered section by section. This Ordinance follows the format and provisions of the English Act of 1929 and it is hoped that the Federated Malay States Enactment will be almost identical with that of the Colony, so that the mercantile community of Malaya will not be hampered by two conflicting laws.

BANKRUPTCY.

The main Bankruptcy Office is in Kuala Lumpur and there is a Branch Office in Ipoh.

During the year 62 bankruptcy notices and 52 bankruptcy petitions were filed; 37 receiving orders and 37 adjudication orders were made as compared with 34 bankruptcy notices, 19 bankruptcy petitions, 21 receiving orders and 20 adjudication orders in 1937.

Of the persons adjudged bankrupt, 27 were Chinese, 8 Indians and Ceylonese and 2 Malays. By occupation 15 were traders, 3 miners, 2 contractors, 2 Government employees, 2 Government pensioners, 2 commercial clerks, and 2 butchers.

Trade Bankruptcies.—These showed a large increase in Perak: 10 as against 1 in 1937. The increase is due to adverse trade conditions. Traders who held large stocks of Japanese goods were compelled by popular feeling over the Sino-Japanese War to abandon them or dispose of them at ridiculously low prices. The total gross liabilities and assets declared by the bankrupts under the 37 receiving orders were $541,691 and $100,473 respectively. Of these $320,368 and $69,841 respectively represent the gross liabilities and assets of the 15 trade bankruptcies. The so called assets mainly consisted of book debts which have been carried forward year after year and by reason of the fact that the debtors cannot be found or are devoid of means to pay, realisation is often impossible.

There are indications that traders obtain goods on credit and sell them quickly at under cost price for cash which is remitted out of the country. In these cases the assets in bankruptcy are so negligible in proportion to the liabilities that the labour of the Bankruptcy Office must necessarily be negative in financial results and constitute reasonable grounds for discontent and irritation to the creditors. Action is therefore being taken in certain cases to put such a dishonest trader into Court on charges of fraudulent disposal of property, failure to keep proper books of account, obtaining credit when insolvent or without reasonable expectation of being able to pay debts, etc.

Four compositions were accepted by creditors during the year. There were 54 applications for discharge of which 13 were granted unconditional discharge, 30 subject to suspension and consent to judgment, 5 were refused and 6 pending at the end of the year.

On 31st December, 1938, there were 547 undischarged bankrupts.

There were two criminal prosecutions against bankrupts during the year for offences under the Enactment. In one case a fine of $20 or 2 weeks r.i. was imposed and in the other $10 fine or 10 days r.i. Three warrants for the arrest of bankrupts were issued but none could be executed.

Wage-earners and Indebtedness.—This is the third year of the operation of the special legislation, Enactment No. 14 of 1936, dealing with wage-earners, and 387 wage-earners administration orders were made in 1938 of which 315 were against Government employees. The number made in 1937 was 514 of which 475 were Government employees. The total undischarged debtors on 31st December, 1938, was 1,024.

In the majority of cases the main cause of indebtedness has not been the inadequacy of salaries but the operation of the Asiatic family custom which is necessary and commendable up to a point but disastrous when carried to extremes, e.g., the support of numerous dependents and the provision of unduly ostentatious family ceremonies.

Very few wage-earners have realised the seriousness and full legal commitments of signing as surety. Casual friendship and kindly sentiment are generally sufficient to induce them to stand surety.

A vigorous campaign against indebtedness was undertaken by the Official Assignee by means of lectures in the principal towns in the Federation and distribution of pamphlets printed in English, Malay, Chinese and Tamil.

The total revenue for the year was $25,795 and the total expenditure was $35,402.

DEPARTMENT OF THE PUBLIC TRUSTEE AND OFFICIAL ADMINISTRATOR.

The year under review was the sixteenth year of the working of the department of the Public Trustee.

During the year the Public Trustee accepted 35 trusts the assets of which were estimated at $385,000. Twenty-three trusts were wound up and at the end of the year 122 trusts were still being administered. Of the 35 trusts accepted 3 were entered into on behalf of Government or on behalf of a community and no value has been included in respect of these.

The value of the property held in trust by the Public Trustee at the end of the year is estimated at $3,224,000.

The office of the Official Administrator, Federated Malay States, is combined with that of the Public Trustee. The Official Administrator accepted during 1938 thirty-two estates the assets of which were valued at $667,000. Twenty-eight estates were wound up and at the end of the year 82 estates were still being administered.

At 31st December, 1938, 204 trusts and estates were in process of being administered by the Public Trustee and Official Administrator and the assets of these trusts and estates had been valued at $4,750,000. The total fees collected by the combined offices was $23,723. During the year amendment was made to the Fee Rules under both the Public Trustee and Probate & Administration Enactments whereby in the former, the High Commissioner, and in the latter, the Federal Secretary were given power to remit fees wholly or partly in any case or class of cases. The powers have been exercised in exempting from fees, gratuities paid by Government to the Public Trustee or Official Administrator when acting as legal personal representative of the estate of a deceased officer and also any trust administered by the Public Trustee as Trustee of the Government of the Federated Malay States or of any Federal Department of Government.

CO-OPERATION.

Expenditure.—The total expenditure for the calendar year was $142,759.

Progress.—The position at the end of the year was as follows:

Type of society.	No. of societies.	No. of members.	Paid-up share capital.	Reserve fund.	Total working capital.
			$	$	$
Rural Credit	60	1,911	71,359	13,719	91,432
Seasonal Credit ...	21	360	3,175	...	3,175
General Purposes (Malay)	40	5,406	...	1,886	19,552
Registered, not working	1				
Urban Thrift and Loan	39	17,812	4,345,400	319,785	4,761,185
Indian Labourers' ...	267	49,383	1,470,348	7,400	1,477,748
Registered, not working	5				
Indian Labourers' Unions	5	24*			
Better Living ...	2	91	...	27	27
General Purposes (Indian)	2	79	4,069	...	5,162
Marketing	5	77	196	93	515
Fairs	4	97			
Stores...	2	459	9,787	504	10,368
Cattle Breeding ...	1	21	16	3	19
Urban Co-operative Unions	2	13*			
Totals ...	456	75,696†	5,904,350	343,417	6,369,183

* Societies. † Societies not included.

Rural Credit Societies.—The year 1938 was a year of depression for agriculturists in the Federated Malay States. The number of rural credit societies remained unchanged while the membership increased by only 8. There was a reduction in the paid-up share capital of $704, but, as an offset to this, there was a marked increase in the amount of loans repaid. Considering the general economic conditions it is surprising that overdue loans were in the aggregate reduced by $2,771. The societies financed their members to the extent of $35,556 and repayments on account of principal amounted to $32,466; the figures for 1937 were $30,824 and $27,970. In spite of low prices, there was no lack of confidence in the future of the societies. On the contrary, there was a confident expectation of improvement and expansion when prices improve.

Seasonal Credit Societies.—There were 12 societies on the register at the beginning of the year. They had $1,253 outstanding in the way of loans to their members and all this was repayable with interest at harvest. In spite of the fact that the harvest was not a good one, the members paid up in full. Last year it was reported that nine new groups were thinking of forming societies. All these were registered during the year, which ended with 21 societies with a membership of 360. Paid up capital had gone up from $1,478 to $3,175.

These societies were designed to save the padi planters from selling forward their crops and in this they are successful. The members of the societies control about half a million gantangs of padi. It is estimated that the saving effected as a result of borrowing from the societies is in the region of $1,500.

General Purposes Societies (Malay).—The number of registered General Purposes Societies amongst Malays in the Federated Malay States increased during the year from 35 to 41, of which one had not started working. Membership of the working societies increased from 4,997 to 5,406. Withdrawals exceeded deposits and yet collections, for the most part in very small sums, during the year amounted to $9,734. The total deposits standing to the credit of members at the end of the year amounted to $17,966.

Marketing Societies.—The five egg-marketing societies seem to have settled into a new routine resulting in a monthly sale of about 6,000 eggs. This is a great fall from the peak number a few years ago. The total number of eggs sold by these societies during the year was 70,978 as against 133,487 in 1937. The monthly average price paid by the societies was $2.31 per hundred eggs as against an estimated average kampong price of $1.95 per hundred.

The practice which has developed amongst members of societies in the area North of Taiping of handing in rubber coupons for joint sale was continued. Altogether, coupons covering 314 piculs and 40 katis were sold for $5,735.

One society, the Simpang Tiga Parit Nibong General Purposes Society, continued in a small way to buy coconuts and sell copra. 125,391 nuts were bought for $1,094. These were turned into copra and sold for $1,529. No other effort at joint production and sale of copra on co-operative lines was made.

Co-operative Shops.—In a year when general purchasing power was low, the co-operative store run by Malays at Ulu Langat did well to increase its sales from $9,156 in 1937 to $10,507 in 1938. The only other registered co-operative shop is the Negri Sembilan Co-operative Stores Society in Seremban. This society had a successful year. The membership increased from 182 to 280 while the capital increased from $7,600 to $9,060. Monthly sales of goods—chiefly provisions—increased from $3,500 per mensem at the beginning of the year to $4,500 per mensem at the end of the year.

In addition to these stores there are others in rural areas which are run on more or less co-operative lines but are not registered as co-operative societies. Of these, the two stores in the Kinta District, the Kota Bharu Store and the Pengkalan Pegoh

Store, bought goods to the value of $7,072 and $5,414 respectively and sold goods to the value of $7,675 and $5,711. These figures are considerably below those of last year.

Salary Earner's Societies.—There were 39 societies registered and working at the end of the year. Membership increased from 16,849 to 17,812 while subscription capital rose from $4,031,100 to $4,345,400. The balance of withdrawable deposits for anticipated expenditure increased from $83,900 to $96,000 at the end of 1938. The total of loans (principal) repaid at $1,395,800 was exceeded by the amount of loans granted to the extent of $29,300. Overdue loans amounted to $5,700 while the reserve funds increased by $22,061 to $319,785. Investments in trustee securities (including deposits in the Post Office Savings Bank) increased during the year by $395,990 to $3,575,956.

Societies amongst Indian Labourers.—The number of these societies actually working increased by 24 from 243 to 267, while membership fell by 2,011 to 49,383. This was due to the general reduction in the number of labourers required on estates to produce the restricted output allowed by the International Rubber Regulation Committee. During the year $514,700 were refunded to members but in spite of this and the reduced membership, the balance of subscription capital standing to the credit of members at the end of the year was higher by $293,312, at $1,470,348, than at the end of 1937. The average savings per member increased from $22.90 to $29.77. In the year ended 30th June, 1938, loans totalling $130,914 were granted to members as compared with $83,650 for the same period in the previous year. Of the loans granted, $48,217 were borrowed to remit to India. These societies had a total of $1,426,636 invested in trustee securities ($803,761) and the Post Office Savings Bank ($622,875).

Rural Lecture Caravan.—The Rural Lecture Caravan which is operated jointly by the Department of Agriculture, the Rubber Research Institute and the Co-operative Societies Department met with a serious accident on the first day of the initial tour of the year. Although the vehicle itself was a total wreck as a result of the accident, the cine-equipment, loud-speaker unit, exhibits, slides, etc., were but slightly damaged. A lorry was fitted up to take the place of the caravan and carried out seven tours in the Federated Malay States. The estimated attendance was 81,350. In addition to the above tours, twenty-four film shows were given on rubber estates where co-operative societies for Indian labourers have been, or are being, formed. The caravan was also present at the Malayan Agri-Horticultural Association Exhibition held during the August Bank Holidays at Kuala Lumpur. No new long propaganda films were made. A news-reel was prepared showing various local activities of co-operative interest and a film "London on Parade" was purchased from the Travel and Industrial Development Association of Great Britain and Ireland.

LANDS.

The area in private occupation at the end of the year amounted to about 2,608,066 acres under agricultural titles and 218,991 acres under mining titles.

It is estimated that of the 27,540 square miles covered by the four States of the Federation, 16.04 per cent. is land in private occupation and 27.7 per cent. is reserved forest, while the balance of 56.26 per cent. is still State land, including therein land reserved for purposes other than forests.

SURVEYS.

The gross expenditure (inclusive of payments to the Malayan Establishment Office) of the Survey Department amounted to $810,909, an increase of about $80,000 over the figure for 1937. The increased demands made upon the department were responsible for the increase in expenditure. Reimbursements and revenue increased by, approximately, $61,000 to $414,105.

Beyond the normal precise levelling programme, which is now practically completed, no field work was undertaken by the Trigonometrical Branch in the Federated Malay States. Automatic tide gauge observations were continued at Singapore and Penang.

The Topographical Branch which, though a Federated Malay States organisation, carries out surveys on repayment for other Administrations, completed the survey on the standard 1 inch to 1 mile scale of a further 330 square miles in Johore and 284 square miles in Pahang. In addition an area of 73 square miles was surveyed at the request of the Forest Department. This area covers parts of the Lesong and Perah Forest Reserves and will be produced on a scale of 4 inches to one mile. At the request of the Kedah Government arrangements were put in hand towards the end of the year for forming a party to start work early in 1939 on a four year programme with the object of completing the 1 inch to 1 mile map of that State.

In the Revenue Branch requisitions were received for 10,908 lots compared with 8,199 lots in 1937, necessitating a further increase in the number of field parties employed. Towards the end of the year requisitions were received for 755 lots, 8,114 acres for new rubber planting. Field output amounted to 9,236 lots and office output to 10,155 lots, the latter figure including 1,263 lots completed for and at the expense of the Johore Government.

Amongst the maps produced during the year by the Map Production Branch was a new State Map of Negri Sembilan. The Branch continued to print the coupons required for Rubber Regulation, the output for the year being 7,374,000 for Malaya and 3,457,000 for Sarawak against 9,000,000 and 345,000 for the preceding year. Sixteen forged one picul coupons of the seventeenth issue made their appearance during the year, but their inferior quality led to their immediate detection.

With the appointment of a trained Scientific Instrument Maker late in 1937 the Instrument Repairing Branch is fulfilling to a greater degree its true function and the number of surveying instruments now made locally is increasing. Much greater use is also being made of the branch by other departments and the public. As custodian of Weights and Measures for the Federated Malay States the Instrument Repairer carried out the annual test and adjustment of all State standards used to control the working standards.

GEOLOGY.

New appointments brought the number of geologists in the Geological Survey Department to five including the Director. The detailed field work over part of the Batang Padang district of Perak was completed, and that of part of the gold belt of Pahang which lies north of Raub, and in Ulu Selangor was continued. A geological survey has commenced on the stanniferous area near Kuantan. Satisfactory progress in the resumed investigation of the mineral resources of the Federated Malay States has been made.

As usual reports were made on mineral deposits for Government and miners and on the geological aspect of certain engineering schemes for the Public Works Department. At the request of the Johore Government, that State was visited during the year, and field work carried out by two rock collectors formed the basis of a report furnished to the Kelantan Government. Requests for reports on problems outside the Federated Malay States are usually complied with, because of the information gained about possible similar occurrences within the Federated Malay States, but where it is likely that no such useful comparison can be made, it sometimes happens that the time required for furnishing such reports cannot be spared from geological survey work in the Federation.

Enquiries were answered about water supply and minerals as well as about materials for various manufactures. Many minerals and rocks were received for identification, a service provided free of charge if the specimen is from the Federated Malay States, and if the exact locality is disclosed. In cases where the material comes from outside or where the locality is kept secret a small charge is made. During the year over eleven hundred bore samples obtained by "Banka Drills" from bores were examined. These were submitted for the particular purpose of determining if bedrock had really been reached by the prospector, or if there remained the possibility of the occurrence of tin-bearing alluvium below the lowest depths reached by the bores. Information obtained by their examination has permitted the geological mapping of areas concerning which no evidence was formerly available owing to the covering of deep alluvium.

Three hundred and fifty-eight additions were made to the collection of records of prospecting results kept in the head office of the Geological Survey in Batu Gajah. The usefulness of the collection is yearly becoming more apparent. It gives immediate access to all the information known about mineral deposits, and is frequently consulted by Government and by miners. It was used to supplement the geological information in the other departmental records in the revision of the maps of Perak and Selangor showing probable and possible new tin bearing areas. These maps will be revised as new data are obtained and will form a useful basis for Regional Planning.

Reference was made in the Report of the Geological Survey for 1937, paragraphs 21-28, to deposits of rhyolite ash occurring in Perak. Mr. H. D. Collings of the Raffles Museum visited the Khota Tampan deposit and found hand axes of Pleistocene age from the gravel underlying the ash. He has collected a large number of tools from two levels, having considerable differences in the typology of the tools. He is of the opinion that the deposit is probably Middle Pleistocene. This is the first evidence of the existence of man in Malaya at that distant period, contemporaneous with the Ice Age in Europe.

Three stone axes, typical of the Neolithic Period, which in Malaya probably has continued into the present era, were found in the vicinity of Kampong Behrang, a village north-northwest of Tanjong Malim. An interesting legend as to the finding of these stone implements is told by the Malays of this village. The first axe head was found some 8 to 10 years ago under a durian tree shortly after it had been struck by lightning. The scar in the trunk was attributed to the tree having been hit by the implement which, it was considered, fell from the heavens during the storm. As a result these implements are known locally as " Peluru Halilinter". According to the finders, the other two tools were also discovered after severe thunder storms.

A paper "The Creation of Malaya" by E. S. Willbourn, Director of the Geological Survey, was published in the Straits Times Annual. "The Geology of the Neighbourhood of Tapah and Telok Anson with an Account of the Mineral Deposits" by Dr. F. T. Ingham was printed, illustrated by photographs and two coloured geological maps on the scale of one inch to a mile. It is hoped that similar memoirs will be produced each year. A new edition of the coloured geological map of Malaya, scale 12 miles to an inch also was published early in the year.

Collections of Malayan minerals and rocks were presented to schools and other institutions. All assays and analyses of minerals and metals for the Government and for the public were done by the Geological Survey Department at their laboratory in Batu Gajah. The reduced fees for assays of samples certified as having been obtained from localities within the Federated Malay States continued to be in operation. The appointment of an additional chemist, sanctioned in 1937, was filled bringing the number of chemists to two.

PLANTERS LOANS BOARD.

Agricultural Loans.—On 1st January, 1938, the Board had on its registers seven loans aggregating to $183,309.

New loans to the extent of $19,000 were approved during the course of the year while two properties completed repayment of their loans in full amounting to $2,309 and partial repayments totalling $3,000 were received.

At the end of the year, the number of agricultural loans was six totalling $197,000.

Urban Loans.—Urban loans, at the beginning of the year, totalled twenty-eight amounting to $134,255.

New loans amounting to $23,840 were created during the year while ten borrowers completed repayment of their loans in full to the extent of $78,525 and partial payments totalling $7,005 were received.

At the end of the year, the number of urban loans was twenty aggregating to $72,565.

War Service Loans.—Under the War Service Land Grant Scheme, at the beginning of the year, twenty-eight ex-soldiers were indebted to the Board in respect of loans made to them to the extent of $621,656.

During the course of the year, borrowings amounting to $50,621 were repaid while further advances to properties under the Board's administration amounted to $4,211.

At the end of the year, the number of borrowers continuing to benefit under the scheme was twenty-seven, the amount outstanding totalling $575,246.

Interest.—Interest earned during the year amounted to $46,242 of which $12,650 was in respect of agricultural loans, $7,305 in respect of urban loans and $26,287 in respect of War Service Loans.

Interest collected totalled $41,027 while interest credited to Federal revenue in respect of all monies outstanding was $57,863.

Profits and Loss.—The year's working showed a small loss of $106.

Reserves.—The reserves of the Board at 31st December, 1938, stood at $857,886.

Capital.—The capital of the Board is $4,000,000 created by the Planters Loans Fund Enactment (Cap. 131 Revised Laws).

THE ESTATE DUTY OFFICE.

The total of estate duty collected throughout the Federated Malay States in 1938 was $695,697 as against $742,070 in 1937 and $406,310 in 1936.

There were 708 affidavits lodged during 1938 and of this number 116 were valued at $1,000 or under and were therefore certified as exempt from payment of estate duty. There were two estates in which duty was assessed at over $50,000 during 1938.

The amount of revenue assessed and calculated during previous years but remaining unpaid on 31st December, 1938, was $316,717. This sum includes interest up to the end of 1938.

An action was started by the State of Perak for the recovery of a sum of $62,000 from a Chettiar, P. R. A. L. M. M. Muthukaruppan, being estate duty, double duty and interest in respect of certain sums of money which it was alleged had been given by the deceased to certain charities in India. These gifts it was maintained by the Collector had never been completed, the monies remaining in the deceased's firm. It was also alleged that the properties had been ancestral property belonging to a joint Hindu family. There were in all five points and judgment was entered in favour of the Chettiar on four of the points. Appeal was made on behalf of the State of Perak to the full Court of Appeal—Civil Appeal No. 1 of 1938—Judgment was obtained for the State of Perak on three of the points, the decision of Aitken, J., being reversed. The remaining point was referred back for re-hearing. The Chettiar has now appealed to the Privy Council.

Cases of evasion of taxation were again detected during 1938, but it is noted that it is becoming the general tendency to make complete disclosures. There were 163 investigation papers during the year. This is a further increase on the figures of 1937 but does not signify that evasion is on the increase. Any correspondence regarding a death prior to the filing of the affidavit necessitates the registering of an investigation paper.

Wills Review Branch.—This branch was started during the latter part of the year. Its chief objects are the periodical revision of wills and large intestate estates to detect deaths of liferents and beneficiaries. A small temporary staff has been engaged to review all wills back to the year 1900. It is anticipated that this will prove fruitful to revenue.

MILITARY.

The 1st Battalion 2nd Punjab Regiment, carried out normal duties and training in Taiping during the year, and did two periods of training in Singapore in January/February and September/October where it took part in the Combined operations in January and February.

The strength of the Battalion on the 31st December, 1938, was:

British Officers	10
Viceroy's Commissioned Officers	20
Indian Other Ranks	697

THE MALAY REGIMENT.

The authorised Peace Establishment of the Malay Regiment is:

British Officers	13
British Instructors	6
Malay Officers	19
Malay Other Ranks	764

The strength of the Malay Regiment on 31st December, 1938, was:

British Officers	17
British Instructors	11
Malay Officers	6
Malay Other Ranks	764

During the year four more Malay Officers were trained and received their commissions on 1st January, 1939.

The British Staff will be reduced by three British Instructors who sail in January, 1939.

The Battalion was in Singapore twice during the year—in February and October and carried out Battalion and higher training.

The Battalion is now equipped with 19 lorries and six motor cycles enabling a company to be moved at short notice. The officers mess is completed and the mosque will be ready shortly.

There are now 266 Malay Other Ranks occupying married quarters.

Eighteen Instructors were loaned to the Volunteers during the year, chiefly at week-ends, and three demonstration platoons were furnished at different times.

VOLUNTEERING.

The year under review has seen the local Volunteer Forces completed in accordance with the reorganization laid down in 1936. During the last twelve months the majority of rifle companies have been brought up to strength and the last of the new sub-units, the Engineer Sections, have been added. Certain modifications in the establishment have had to be made in order to complete these engineer sections so as to get the right class of man, and these units when trained should now form a most valuable asset to the Battalions.

A start has also been made in raising the cadre Motor Transport Companies in Perak, Selangor and Negri Sembilan. The European personnel has already been raised. This has been found from officers and other ranks on the reserve, a large number of whom readily volunteered for this service.

During the year a quantity of essential stores and equipment was purchased to enable the Force to be better equipped to take the field, and although much has yet to be done before it can be stated that the Force is fully equipped, efforts are being made and will continue to be made in the future to see that nothing is lacking to make the Force fit to take the field.

The Rifle Ranges all over the Federation have been given special attention and improvements made to cope with the increased strength of the units using them. With the increase in the facilities on these ranges it is hoped to get this essential side of the Volunteers' training carried out earlier in the year than previously, so that more time can be given to tactical training.

A slight increase in the number of officers is noticeable. A higher standard is being demanded of candidates for commissions, and a general improvement in leadership and tactical knowledge has been in evidence. A high percentage of the officers are of considerable age. Efforts will be made to obtain younger officers. It is, however, a very difficult thing in these days to get young men to take on the exacting duties demanded of an officer in the Volunteers, as there is no doubt that to become efficient themselves and devote the necessary attention to the training of the men under their command, demands a great deal of their spare time.

The effective Colour Service strength of Europeans on the 31st October, 1938, was 833, as compared with 733 in 1937. This number includes the personnel of the new Units, i.e., Engineer Sections and Motor Transport Units, as well as a general increase amongst the existing units. It is, however, a satisfactory total especially as the numbers on leave ex-Malaya are the same as last year.

In the 1st (Perak) Battalion the enrolments of European Volunteers have been 86 as opposed to 68 discharges. In the 2nd (Selangor) Battalion, in spite of a very intensive recruiting campaign at the commencement of the year, the discharges are one more than the enrolments. In the 3rd (Negri Sembilan) Battalion the strength of Europeans has increased by 15 and in the 4th (Pahang) Battalion by 14. The Light Battery and Signal Company have also shown a slight increase.

The enrolment of men for the Engineer Sections has been carried out. For these units men of a high standard of education and with some technical training as a tradesman are required. Satisfactory progress has been made in most States and so long as a reasonably high standard is insisted upon these units should prove of considerable value in the Battalions.

Annual Camps were much better attended during the year than in the past.

A large increase of attendances at the courses of instruction held both in Battalions and by Headquarters, Federated Malay States Volunteer Force, at Port Dickson Camp has been noticed during 1938 and the number of Europeans taking courses at home during their annual leave is most satisfactory.

A committee appointed by His Excellency the General Officer Commanding to go into the organisation and equipment of the medical arrangements in the Federated Malay States

Volunteer Force sat during the early part of the year and its recommendations have been approved and Government asked to take steps to provide the necessary men and money to put the medical arrangements on a sound footing. All Battalions have a nucleus of a medical staff in their establishment and training is being carried out and stores obtained.

MALAY ADMINISTRATIVE SERVICE.

In March, 1910, a scheme for the employment of Malays in the Public Service (Higher Subordinate Class) was introduced with the object of training boys of good family to fit them for high and responsible appointments in the Government service. The officers appointed under that scheme were styled Malay Assistants. Probationer Malay Assistants were selected from boys who had passed the 7th Standard at the Malay College, Kuala Kangsar. After selection they had to undergo a three-year course of study in the College and show proficiency in official correspondence, Treasury work and other prescribed subjects before being appointed as Malay Assistant, Grade III. On promotion to Grades II and I of the scheme Malay Assistants were eligible to serve as Settlement Officers and in other appointments of similar status. There was provision for a Special Class consisting of two Magisterial appointments, three appointments of Assistant District Officer, one of Malay Assistant and one of Assistant Conservator of Forests. The salary scale of the various grades, including the Special Class, was the same as that of the General Clerical Service in force at the time. The scheme also held out hope to officers in the Special Class of promotion to higher appointments in the Civil Service, thus envisaging the possibility of further development should the work and ability of officers on the scheme justify further advancement.

The outbreak of the Great War, making it necessary for Government to free as many of its European officers as possible for military duty, resulted in a considerable increase in the numbers of Malay Assistants appointed to higher and more responsible posts, and in 1917 it was decided to introduce a new scheme which opened to the Malay Officers a well-paid administrative career. The passing of the Cadets' Law Examination was introduced into this scheme as a condition for promotion to the Special Class.

The 1917 scheme was in turn superseded in 1921 by another scheme which provided that boys educated in English schools other than the Malay College, Kuala Kangsar, should be eligible to compete for 50 per cent. of the annual number of vacancies for probationerships. There were at the time of the introduction of this revised scheme in 1921 twelve Malay Officers who were performing the duties of Civil Service appointments or of additional appointments open to Cadets. The number of Malay Officers at end of 1921 was 50 and there were in addition 23 Probationers.

The Malay Administrative Service Scheme in its present form came into force on 1st January, 1938. Appointments as Probationers in the Malay Administrative Service are open to boys already receiving an education at the Malay College and to approved Malay candidates from English schools in the Federated Malay States. Candidates for Probationerships must have passed either the School Certificate Examination with credits in English and three other subjects, the Matriculation Examination of any University in the United Kingdom or any other examination approved by the Senate of Raffles College, Singapore. Candidates must have attained the 17th and not have passed the 20th birthday. In the case of candidates who have taken an honours degree at Oxford or Cambridge the age limit may be waived and they may be appointed on a salary higher than the initial salary prescribed under the scheme. Vacancies are filled by the Federal Secretary on the recommendation of a Selection Board. Candidates selected as Student Probationers are sent at the expense of the Federated Malay States Government to the Malay College, Kuala Kangsar, for one year and to Raffles College for a period of three years where they take a course in English and Law and such other subjects as are recommended by the College authorities. A student Probationer of exceptional promise may at the end of the course at Raffles College be considered for a scholarship to one of the English Universities. Student Probationers who have obtained a Diploma at the end of the course at Raffles College are appointed Probationers and serve on probation for at least two years during which period they have to pass the examination in General Orders and Colonial Regulations set for Cadets of the Malayan Civil Service, and also an oral examination on subjects connected with the actual work they have been doing. Thereupon they become Malay Officers, Class III, on the salary of $150-A10-$170 p.m. After serving for three years in this Class and provided they have passed the examination in Law prescribed for Cadets of the Malayan Civil Service, Malay Officers are promoted to Class II on a salary scale of $200-A10-$300 per mensem. There are 22 appointments in Class II mainly consisting of Deputy Assistant District Officerships.

Malay Officers in Class II with not less than seven years' service become eligible for promotion to Class I. Promotion to Class I is not automatic or by seniority but depends on the occurrence of vacancies and is by selection according to merit and qualifications. There are 29 posts in this Class, the salary scale of which is $330-A15-$420 per mensem. Officers in Class I are called upon to function as Assistant District Officers, Second Magistrates and in other appointments of a similar status and responsibility, many of which were formerly in the cadre of the Malayan Civil Service.

The declared policy of Government is that Malay Officers of the Malay Administrative Service who by reason of their character, ability and industry have shown their fitness should be promoted to the Malayan Civil Service. Officers of Class I of the Malay Administrative Service who have served in that Class for at least three years are eligible for promotion to the Malayan Civil Service for service in the Federated Malay States only:

such promotions being made by selection according to merit and depending upon vacancies in the authorised cadre. At the end of the year under review 20 Malay Officers had been promoted to the Malayan Civil Service.

General.

HIS MAJESTY THE KING was graciously pleased to confer the following honours :

At the New Year—

Companion of the Most Distinguished Order of St. Michael and St. George	Mr. Charles Henry Sansom, Inspector-General of Police, Federated Malay States
Officer of the Most Excellent Order of the British Empire (Civil Division)	Mr. Arthur Harold Dickinson, Chief Police Officer, Selangor
Member of the Most Excellent Order of the British Empire (Military Division)	Regimental Quartermaster Sergeant Francis Alexander Pickford Wright, Federated Malay States Volunteer Force
Meritorious Service Medal of the Civil Division of the Most Excellent Order of the British Empire	Che Mohamed Noor bin Yusuf, Chief Sub-Inspector, Federated Malay States Police
King's Police Medal for Distinguished Service	Mr. Charles Reginald Morrish, D.S.C., Assistant Superintendent of Police, Federated Malay States
King's Police Medal for Distinguished Service	Mr. Roger Owen Wingfield Marchant Davis, Assistant Superintendent of Police, Federated Malay States
King's Police Medal for Gallantry	Lance-Corporal Abdul Rani bin Koming, Federated Malay States Police

On His Majesty's Birthday—

Honorary Knight Commander of the Most Distinguished Order of St. Michael and St. George	His Highness Hisamud-din Alam Shah ibni Al Marhum Sultan Ala'idin Sulaiman Shah, Sultan of Selangor
Commander of the Most Excellent Order of the British Empire (Civil Division)	William Stanley Reeve-Tucker, Esq.

Officer of the Most Excellent Order of the British Empire (Civil Division)	John Charles Innes, Esq.
Honorary Officer of the Most Excellent Order of the British Empire (Civil Division)	Raja Yusuf ibni Sultan Abdul Jalil al-Marhum Rathi’ Allah, Raja Bendahara of Perak
Officer of the Most Excellent Order of the British Empire (Military Division)	Lieutenant-Colonel George McIllree Stanton Bruce, M.C., Officer Commanding, Malay Regiment
Member of the Most Excellent Order of the British Empire (Civil Division)	Charles Walker Rozario, Esq., Federated Malay States Railways
Member of the Most Excellent Order of the British Empire (Military Division)	Regimental Sergeant-Major Albert Edward McCarthy, Malay Regiment
Meritorious Service Medal of the Order of the British Empire (Military Division)	Staff Sergeant-Instructor Mohamed Saaid bin Mat Amin, Federated Malay States Volunteer Force

Certificates of Honour were awarded to the following persons in recognition of their loyal and valuable services to the Government of the Federated Malay States:

Mr. Toh Eng Hoe, J.P., M.S.C.

Mr. N. Eliatamby, J.P.

Inche Mohamed Ashruddin bin Ahmad Tasir.

Mr. M. Ponnampalam.

His Highness Ala’idin Sulaiman Shah, G.C.M.G., K.C.V.O., ibni Al-Marhum Raja Muda Musa, Sultan of Selangor, died at Klang on 31st March, 1938, and the funeral took place on the 4th April, 1938. The proclamation of the Raja Muda as Sultan in succession to his father was read by His Excellency the High Commissioner at the Astana Mahkota, Klang, before the body of the late Sultan was removed to its last resting place.

His Highness Paduka Sri Sultan Iskandar Shah, G.C.M.G., K.C.V.O., ibni Al-Marhum Al-Sultan Idris, Sultan of Perak, died on 14th October, 1938, and the funeral took place on 17th October, 1938, at Kuala Kangsar. Raja Sir Abdul Aziz, K.C.M.G., K.B.E., ibni Al-Marhum Raja Muda Musa was publicly proclaimed as having succeeded to the dignity of Sultan of the State under the title of Paduka Sri Sultan Abdul Aziz Al’ Mu’tassim Bil’lah Shah by His Excellency the High Commissioner on the 17th October, 1938.

During the year Sir Frank Stockdale, K.C.M.G., C.B.E., Agricultural Adviser to the Secretary of State for the Colonies paid a visit to Malaya, in response to an invitation from His Excellency the High Commissioner, to discuss certain matters concerning Malayan Agriculture and Agricultural policy in the Peninsula generally.

A Commission on Higher Education was appointed, with the following terms of reference:

> "To survey existing arrangements for higher education, general and professional, in Malaya; and to consider in the light of local needs and conditions whether they require extension, and if so in what directions and by what methods; to report upon the present work of Raffles College, Singapore, and on any potential development that may seem desirable."

The Commission consisted of:

Sir William H. McLean, K.B.E., Ph.D., M.Inst.C.E., member of the Colonial Office Advisory Committee on Education in the Colonies (*Chairman*). Professor H. J. Channon, D.SC., Professor of Biochemistry, Liverpool University, with Mr. H. North-Hunt, M.C.S., as Secretary and Mr. R. F. C. Markham, Malayan Educational Service, as Assistant Secretary.

Sir Lewis Fermor, O.B.E., D.SC., A.R.S.M., F.G.S., F.A.S.B., M.Inst.M.M., late of the Geological Survey of India, paid a visit to Malaya to investigate the present conditions and future prospects of the mining industry and to report to His Excellency the High Commissioner on mining problems generally. The report had not been received by the end of this year.

Prices of both rubber and tin remained during the year in the neighbourhood of the figures to which they fell in the last quarter of 1937 and the year 1938 was not such a prosperous one for the Federated Malay States as its predecessor. Nevertheless the revenue received was in amount up to the average. It was found possible to transfer from Surplus Funds a further sum of $25,000,000 to the Special Reserve Fund and also to make a start on Renewals Funds for the Electrical and Posts and Telegraphs Departments.

Mr. C. D. Ahearne, C.M.G., M.C.S., continued in the office of Federal Secretary throughout the year

KUALA LUMPUR,
28th July, 1939.

H. FRASER,
Acting Federal Secretary, F.M.S.

APPENDIX A.

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION.

Year.	Revenue.	Expenditure.	Trade. Imports.	Trade. Exports.	Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
	$	$	$	$		$		$	$	$		
1889	5,013,000	4,091,078	15,653,456	19,720,689	26,029	1,750,008	...	...	190,538	359,025	373,343	1889
1890	4,840,065	5,237,275	15,443,809	17,602,093	26,976	1,609,401	...	...	166,054	406,032	398,780	1890
1891	4,572,310	5,554,800	14,889,942	18,495,554	32,114	1,573,441	...	...	199,680	414,889	424,218§	1891
1892	5,347,189	5,883,407	19,161,159	22,662,359	33,477	2,097,274	...	...	300,680	537,111	449,656	1892
1893	6,413,134	6,797,538	21,896,117	27,373,760	39,912	2,602,380	...	...	347,600	723,934	475,093	1893
1894	7,511,809	7,162,396	24,499,615	32,703,147	47,676	3,238,000	...	...	457,262	986,617	500,531	1894
1895	8,481,007	7,582,553	22,653,271	31,622,805	49,592	3,379,813	...	...	468,239	1,294,390	525,969	1895
1896	8,434,683	8,598,147	21,148,895	28,395,855	48,541	3,126,974	...	...	511,237	1,344,994	551,407	1896
1897	8,296,687	8,795,313	25,000,682	31,148,340	44,095	2,716,263	...	...	636,054	1,294,139	576,844	1897
1898	9,364,467	11,110,042	27,116,446	35,241,003	41,167	3,210,699	...	...	636,927	1,394,720	602,282	1898
1899	13,486,410	11,499,478	33,765,073	54,895,139	38,960	6,181,542	...	...	639,899	1,722,475	627,720	1899
1900	15,609,807	12,728,930	38,402,581	60,361,045	43,111	7,050,382	...	...	712,898	2,254,742	653,157	1900
1901	17,541,507	17,273,158	39,524,603	63,107,177	47,475	6,968,183	...	...	626,114	2,377,040	678,595§	1901
1902	20,550,543	15,986,247	45,757,240	71,350,243	47,258	8,438,775	...	...	661,668	2,856,640	714,435	1902
1903	22,672,567	16,219,872	47,790,059	80,253,944	50,842	9,590,505	...	...	721,304	3,608,054	750,276	1903
1904	22,255,269	19,318,768	46,955,742	77,620,084	51,733	8,814,688	...	...	801,959	3,605,029	786,116	1904
1905	23,964,593	20,750,395	50,575,455	80,057,654	50,991	9,249,627	104	...	887,593	3,940,599	821,957	1905
1906	27,223,476	18,899,425	50,926,606	80,852,325	48,617	10,036,798	432	50,023	1,437,753	4,564,100	857,797	1906
1907	28,793,745	20,225,993	52,542,277	80,593,196	48,429	9,395,825	905	97,752	1,701,682	5,200,911	893,637	1907
1908	24,623,325	25,874,573	48,171,243	65,599,933	50,835	7,285,864	1,402	113,981	1,598,713	5,066,153	929,478	1908
1909	25,246,863	23,633,851	46,194,598	76,273,438	48,743	7,155,124	2,698	360,055	1,623,876	5,188,111	965,318	1909
1910	26,553,018	23,598,610	53,255,151	102,851,990	43,862	7,162,026	5,439	962,973	2,201,469	5,868,507	1,001,159	1910
1911	35,056,544	25,202,749	66,532,039	116,280,927	44,148	8,818,764	8,792	999,207	2,290,962	7,058,689	1,036,999§	1911
1912	42,647,687	30,990,487	76,122,679	154,974,195	48,420	10,850,121	15,638	1,576,224	2,875,414	8,421,016	1,109,017	1912

NOTE.—The total Revenue and the total Expenditure of Perak, Selangor and Negri Sembilan in 1875 were, respectively, $409,394 and $436,872. Figures for Pahang first appear in 1889. Federation dates from 1st July, 1896.

§ A census of the population was taken in 1891, 1901, 1911, 1921 and 1931. The population of Perak in 1879 was estimated at 81,084, and in 1889 at 194,801: that of Selangor in 1884 at 46,568 and in 1887 at 97,106. No figures for the other States are given prior to 1891.

Appendix A—(*cont.*).

FEDERATED MALAY STATES.—GENERAL RETURN OF REVENUE, EXPENDITURE, TRADE, AND POPULATION—(*cont.*).

Year.	Revenue.	Expenditure.	Trade. Imports.	Trade. Exports.	Exports of Tin and Tin-ore (in Tons).	Duty on Tin.	Exports of Rubber. (in Tons).	Duty on Rubber.	Land Revenue and Land Sales.	Railway Receipts.	Population.	Year.
	$	$	$	$		$		$	$	$		
1913	44,332,711	47,287,581	86,409,157	148,669,498	50,126	10,729,888	23,720	1,395,923	2,790,451	9,469,446	1,117,625	1913
1914	37,309,943	55,010,037	72,140,005‖	122,962,929‖	49,042	7,046,869	31,012	1,334,245	2,562,436	9,133,911	1,136,500	1914
1915	40,774,984	42,838,631	60,015,935‖	161,838,118‖	46,766	7,235,086	56,782	2,401,914	2,597,836	9,187,512	1,172,336	1915
1916	51,121,856	31,966,581	69,621,113‖	219,943,686‖	43,870	7,903,785	62,813	3,851,815	3,068,766	11,616,696	1,208,177	1916
1917	65,553,186	40,878,746	73,261,725	271,485,389‖	39,833	9,331,288	80,022	4,914,781	3,308,464	13,189,829	1,244,018	1917
1918	68,448,862	45,286,910	74,750,746	223,066,282‖	37,370	13,141,841	78,389	2,254,556	3,657,454	13,106,413	1,279,859	1918
1919	72,135,075	70,676,961	118,854,965	279,135,105	36,934	9,944,177	106,453	4,883,123	3,533,829	14,957,460	1,315,700	1919
1920	72,277,146	100,433,471	170,522,123	288,715,698	34,934	12,203,531	101,330	4,443,100	4,004,095	17,316,533	1,300,000	1920
1921	54,449,568	114,386,546	102,914,877	134,955,549	34,489	6,153,360	94,510	164,169	3,568,490	16,198,426	1,298,292§	1921
1922	52,494,110	49,811,007	78,822,349	140,429,775	35,286	5,766,808	128,461	802,390	3,731,041	13,816,324	1,360,876	1922
1923	63,952,132	52,825,572	89,088,237	197,100,950	37,650	8,265,195	101,311	4,664,374	3,919,900	14,675,106	1,389,667	1923
1924	70,715,407	54,161,234	97,436,302	212,884,740	44,043	12,543,624	93,507	4,228,677	4,135,322	16,210,202	1,418,455	1924
1925	86,564,279	69,550,382	137,116,207	411,878,610	45,926	14,000,633	118,590	8,667,274	3,933,622†	18,743,352	1,447,243	1925
1926	102,541,400	87,663,747	173,887,724	445,600,203	45,947	15,583,799	160,213	11,192,715	5,389,042	21,640,545	1,476,032	1926
1927	105,404,458	93,263,915	176,161,194	339,925,603	52,180	17,704,014	127,593	8,575,863	6,656,724	23,055,515	1,504,823	1927
1928	95,655,560	109,004,240	191,473,471	278,523,482	61,935	16,037,720	174,490	3,712,752	6,639,808	22,347,560	1,533,612	1928
1929	81,799,584‡	84,660,975¶	201,393,405	349,012,595	67,042	15,420,646	261,352	4,313,743	6,694,598	23,331,618	1,562,401	1929
1930	65,560,870‡	82,470,192¶	168,020,418	213,652,044	62,065	9,121,971	249,675	1,084,440	6,224,381	19,272,903	1,722,941	1930
1931	52,348,659‡	62,163,328¶	106,201,211	125,177,183	51,250*	5,501,733	243,886	543,778	4,832,700	12,912,579	1,723,117§	1931
1932	43,817,151‡	53,740,139¶	71,133,301	87,851,281	27,091*	3,594,022	235,898	376,380	4,268,125	9,483,859	1,770,486	1932
1933	47,198,806‡	50,258,671¶	67,129,150	111,885,935	22,824*	4,886,683	248,356	577,406	3,989,363	9,036,776	1,597,770	1933
1934	58,926,323‡	47,211,228¶	84,731,059	202,725,341	36,385	8,886,234	256,516	2,160,157	5,141,756	11,284,147	1,631,728	1934
1935	62,364,264‡	51,119,943¶	87,102,149	186,770,827	40,748	9,700,616	194,478	2,247,497	5,593,334	11,871,097	1,777,421	1935
1936	68,090,902‡	52,702,228¶	96,796,795	246,945,491	64,719	13,410,254	182,873	2,817,180	5,804,247	13,086,733	1,847,951	1936
1937	80,864,589‡	71,143,470¶	131,101,350	357,247,152	75,394	19,487,585	247,386	4,763,184	6,073,314	16,812,650	1,961,397	1937
1938	63,053,114‡	101,584,059¶	123,380,927	174,804,222	41,079	8,122,685	171,248	1,553,483	6,531,986	14,685,567	2,089,835	1938

‖ Excluding bullion and specie. § *Vide* foot-note on page 115. † The figures for previous years included items now omitted owing to reclassification of revenue. ‡ Exclusive of Railway receipts. ¶ Exclusive of Railway expenditure. * The tonnage for the years 1931, 1932 and 1933 was based on 72% tin content of ore and not on the true assay value, viz., 75.5%.

APPENDIX B.

F.M.S. 3 PER CENT. STERLING LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1938.

Dr.	$ *c.*	$ *c.*	*Cr.*	$ *c.*
To Redemption of 4½ per cent. S.S. Sterling Loan 1935-45—			By Loan Subscription— 3 per cent. 1960-70 issued in June, 1935	34,285,714 29
Total Loan raised	36,000,000 00			
Less Redemption from Revenue Account	1,714,285 71	34,285,714 29		
		34,285,714 29		34,285,714 29

APPENDIX C.

F.M.S. 4½ PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1938.

Dr.	$ *c.*	$ *c.*	*Cr.*	$ *c.*
To Loan Expenses—			By Loan Subscription— 4½ per cent. issued at 98 in May, 1931	16,000,000 00
(*a*) Discount on Issue Price ...	320,000 00			
(*b*) Commission and Charges ...	40,000 00	360,000 00		
To Loan Works...	...	13,907,235 20		
To Balance	...	1,732,764 80		
		16,000,000 00		16,000,000 00

APPENDIX D.

Dr. F.M.S. 3 PER CENT. LOCAL LOAN CAPITAL ACCOUNT TO 31ST DECEMBER, 1938. **Cr.**

Dr.	$	c.	$	c.	Cr.	$	c.
To Loan Expenses—					By Loan Subscription—		
(*a*) Advertisement	600	20			3 per cent. 1956-66 issued in July, 1936	15,000,000	00
(*b*) Commission and Charges ...	37,500	00	38,100	20			
To Transfer to the Supplementary Sinking Funds for the Redemption of the Straits Settlements 6 per cent. Sterling Loan 1936-51	...		14,961,899	80			
			15,000,000	00		15,000,000	00

APPENDIX E.

TABLE A.

IMPORT DUTIES.

		Rates of duty.	
Description of goods.	Unit.	Full duty. $ c.	Preferential duty. $ c.
I.—Intoxicating liquors :			
(a) Rectified spirit	Per proof gallon	14 00	
(b) Brandy and any other intoxicating liquor not hereinafter provided for	,,	14 00	10 50
(c) Brandy in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit	Per gallon	10 50	8 00
(d) Whisky, rum and gin	Per proof gallon	13 00	
(e) Whisky, rum and gin in bottle and accepted by the Proper Officer of Customs as not exceeding 81 per cent. of proof spirit	Per gallon	9 50	
(f) Toddy, arrack, saki and samsu including medicated samsu	Per proof gallon	12 00	
(g) Bitters and liqueurs not exceeding 100 per cent. of proof spirit	Per gallon	13 00	
(h) Sparkling wines not exceeding 42 per cent. of proof spirit	,,	6 00	5 00
(i) Still wines exceeding 26 per cent. but not exceeding 42 per cent. of proof spirit	,,	4 50	3 90
(j) Still wines not exceeding 26 per cent. of proof spirit	,,	1 50	90
(k) Ale, beer, stout, porter, cider and perry	,,	1 30	1 20
II.—Tobacco :			
(a) Cigars and snuff	Per pound	1 60	
(b) Cigarettes	,,	1 10	1 00
(c) Unmanufactured tobacco	,,	70	
(d) Manufactured tobacco excluding cigars, cigarettes and snuff—			
(i) if imported for sale to the public in air-tight tins or containers	,,	1 10	1 00
(ii) not otherwise provided for	,,	80	

Description of goods.	Unit.	Rates of duty. Full duty. $ c.	 Preferential duty. $ c.
III.—Petroleum :			
(a) Kerosene with a flashing point higher than 73°F but below 200°F	Per gallon	05	
(b) Petrol	,,	35	
IV.—(a) Sugar, including sucrose, saccharose, cane sugar, beet sugar, maple sugar, palm sugar, gula malacca, gula kabong, gula nipah, gula kachang, jaggery, sugar candy, sugar cane, molasses, treacle, golden syrup, maple syrup, dextrose, glucose, grape sugar, starch sugar, corn sugar, starch syrup, corn syrup, wheat syrup, wheat jelly, rice jaggery, laevulose, fructose, fruit sugar, invert sugar, honey, lactose, milk sugar, maltose and malt sugar	Per pound	02	Free
(b) Sweets, chocolates, confectionery, and any other products containing more than sixty parts per centum by weight of any one or more of the sugars enumerated under IV (a)	,,	05	03
Exemptions—			
(i) Sweets, chocolates, and confectionery in manufacturers' unopened original tins, bottles, cartons or boxes containing not more than two pounds nett weight.			
(ii) Articles which are dutiable under any other paragraph of Table A.			
V.—Cartridges other than such as are included in section 19 of the Explosives Enactment	Per 1,000	1 00	Free
VI.—Matches :			
Containers with—			
(i) not more than 10 matches	Per 100 containers	12	
(ii) more than 10 but not more than 20 matches	,,	24	
(iii) more than 20 but not more than 50 matches	,,	60	
For every additional 25 matches or part of 25 matches over 50 in a container, a duty additional to the duty under (iii)	,,	30	

Description of goods.	Unit.	Rates of duty.	
		Full duty.	Preferential duty.
		$ c.	$ c.
VII.—Edible oils and fats :			
(*a*) (i) Kachang and ground-nut oil	Per pound	04	01
(ii) Gingelly oil	,,	02	Free
(*b*) Butter, tinned	,,	04	Free
(*c*) ,, frozen	,,	04	Free
(*d*) Margarine	,,	05	Free
VIII.—Cement	Per ton	12 00	6 00
IX.—Cement manufactures other than tiles	,,	2 00	
X.—Tiles :			
(i) Roofing	,,	12 00	
(ii) Flooring and wall	,,	12 00	10 00
XI.—Cosmetics and perfumery	*Ad valorem*	25%	Free
XII.—Textiles and apparel :			
(*a*) Piece goods made of silk, cotton, linen, artificial silk and all mixtures made of cotton, linen, artificial silk, silk and, or, other materials	*Ad valorem* or per yard	20% or 5 cents per yard whichever is higher	10% or 2½ cents per yard whichever is higher
(*b*) Hosiery of pure silk	*Ad valorem*	15%	10%
(*c*) Cotton, linen, jute, silk or artificial silk, felt, flannel, woollen and all textile goods made from plant fibres, whether finished goods or not, other than yarn, thread, gunnies and waste, except as provided in (*a*) and (*b*) above	,,	20%	10%
(*d*) Wearing apparel not otherwise provided for, including boots, bootees, shoes, overshoes, slippers and sandals of all descriptions and of whatever material finished or unfinished, other than articles specified in the next following item	,,	20%	10%

Description of goods.	Unit.	Rates of duty.	
		Full duty.	Preferential duty.
		$ c.	$ c.
XII.—Textiles and apparel—(*cont.*)			
(*e*) Boots, bootees, shoes, overshoes, slippers and sandals of all descriptions made wholly or partly of rubber, balata or gutta-percha (except where the outer part of the uppers, apart from stitchings, fastenings or ornaments, is made entirely of leather or leather and elastic)	Per pair	50	10
(*f*) Rubber soles	,,	25	05
XIII.—(*a*) Leather, dressed	*Ad valorem*	5%	Free
(*b*) Tanned hides and skins, leather not provided for in (*a*) above and imitation leather, leather and imitation leather manufactures other than fancy goods	,,	10%	Free
XIV.—Cycles and accessories:			
(*a*) Cycles—complete	Each	4 50	1 50
Saddles	,,	30	10
Frames—complete	,,	3 00	1 00
Frames—part of	Per piece	15	05
Handlebars—with fittings and otherwise	Each	30	10
Rims	,,	30	10
Chains	,,	30	10
Cycle pumps	Per dozen	30	Free
(*b*) Cycle tyres (outer covers)	Per cover	15	08
,, inner tubes	Per tube	06	03
(*c*) Motor and motor-cycle tyres (outer covers)	*Ad valorem*	20%	Free
(*d*) Motor and motor-cycle inner tubes	,,	20%	Free
XV.—(*a*) Wireless receiving sets, radio-gramophones, valves and other wireless parts and accessories (except transmitting apparatus)	,,	5%	Free

Description of goods.	Unit.	Rates of duty.	
		Full duty.	Preferential duty.
		$ c.	$ c.
XV.—(*cont.*)			
(*b*) Musical instruments other than pianos. Wireless transmitting sets and parts thereof, gramophones, electrical gramophones or reproducers, phonographs, records, needles, valves and other parts and accessories, except as provided in (*a*) above	*Ad valorem*	10%	Free
XVI.—Coffee	,,	—	—
XVII.—Ground-nuts	Per pound	00¾	Free
XVIII.—Milk (including cream), condensed, dessicated or preserved	For 100 lbs. nett weight	4 00	Free
XIX.—(*a*) Canned salmon, red-sock eye or blue black and silver	*Ad valorem*	7½%	Free
(*b*) Fruits, vegetables and fish in metal, glass or earthenware containers except as provided in (*a*) above	,,	15%	Free
XX.—Printing paper	,,	10%	Free
XXI.—Manufactured brass, bronze, and copperware	,,	15%	5%
XXII.—(*a*) Electric batteries and parts thereof for torches or hand-lamps	,,	10%	Free
(*b*) All other electric batteries and parts thereof	,,	15%	Free
XXIII.—Paraffin wax and articles made thereof	,,	15%	5%
XXIV.—Fish maws and sharks' fins	,,	10%	Free
XXV.—Umbrellas and lamp shades covered with silk, artificial silk or cotton	,,	5%	Free
XXVI.—Tea	Per pound	08	06
XXVII.—Saccharine	,,	5 00	
XXVIII.—Fireworks and crackers	,,	10	

TABLE B.

EXPORT DUTIES.

I.—AGRICULTURAL PRODUCTS.

Description of goods.	Duty.
(*a*) Gambier	15 cents per pikul
(*b*) Gutta-percha (cultivated) meaning gutta-percha produced from any of the following trees which have been cultivated on alienated land to the satisfaction of the Commissioner :	
(i) Getah Sundik, Payena Leerii sp.	2½ per cent. *ad valorem*
(ii) Getah Simpor, Palaquium sp.	
(iii) Getah Puteh, Palaquium sp.	
(iv) Getah Taban, Palaquium oblongifolium	
(v) Getah Taban, Merah, Palaquium gutta	
(vi) Getah Taban Sutra, Palaquium gutta	
(vii) Getah Taban Puteh, Palaquium obovatum	
(viii) Getah Taban Chaier, Palaquium pustulatum and all other kinds of Getah Taban	
(*c*) Rubber—	
When the price of rubber as notified for the time being in the *Gazette* is under 20 cents per pound	A duty of 1 per cent. of the value of the rubber calculated at the price so notified
When the price is 20 cents or over but under 22 cents per pound	A duty of 1½ per cent. of the value of the rubber calculated at the price so notified
When the price is 22 cents or over but under 24 cents per pound	A duty of 1¾ per cent. of the value of the rubber calculated at the price so notified
When the price is 24 cents or over but under 26 cents per pound	A duty of 2 per cent. of the value of the rubber calculated at the price so notified
When the price is 26 cents or over but under 28 cents per pound	A duty of 2¼ per cent. of the value of the rubber calculated at the price so notified

Description of goods.	Duty.
(*e*) Rubber—(*cont.*)	
When the price is 28 cents or over but under 30 cents per pound	A duty of 2½ per cent. of the value of the rubber calculated at the price so notified
When the price is 30 cents or over but under 35 cents per pound	A duty of 3 per cent. of the value of the rubber calculated at the price so notified
When the price is 35 cents or over per pound	A duty of 3¼ per cent. of the value of the rubber calculated at the price so notified

II.—FOREST PRODUCTS.

Description of goods.	Duty.
(*a*) Rembia ataps	10 per cent. *ad valorem*
(*b*) Nipah ataps—	
(i) Bertindeh tulang	$1.50 per 1,000
(ii) Bertumu tulang	$1.00 ,,
(iii) Bertumu daun	.75 ,,
(iv) Other kinds	10 per cent. of the wholesale prices in the centres of production
(*c*) Getah rambong (India-rubber)	$5.00 per pikul
(*d*) Formosa camphor	10 per cent. *ad valorem*
(*e*) Kepong bark	10 ,, ,,

III.—MINERALS, METALS AND METALLIFEROUS ORES.

Description of goods.	Duty.
(*a*) Tin-ore—	
When the price of tin does not exceed $41 per pikul	$2.40 per pikul
When the price of tin exceeds $41 but does not exceed $42	$2.52 ,,
When the price of tin exceeds $42 but does not exceed $43	$2.64 ,,
and so on, the duty per pikul being increased by 12 cents per every dollar by which the price of tin exceeds $41.	
In the case of tin-ore exported otherwise than under such guarantees as the High Commissioner may require that it shall be smelted in the Straits Settlements, Australia or the United Kingdom, an additional duty of $30 per pikul.	

Description of goods.	Duty.
(*b*) Tin, smelted or manufactured from tin-ore won in the Federated Malay States	On the same scale as that for tin-ore, together with an additional duty of one-third of the duty on tin-ore
(*c*) Additional duty on all tin-ore exported	Ten cents per pikul or part of a pikul
(*d*) Tin slag and hard-head of tin	At the rate prescribed for tin-ore, unless the consignment is accompanied by a certificate of assay granted by the Government Geologist or approved by the Warden of Mines, in which case the duty shall be at the rate prescribed for tin smelted or manufactured on the amount of tin estimated to be contained in such consignment
(*e*) Scheelite	$2 per pikul
(*f*) Wolfram	$2 ,,
(*g*) All other metals and metalliferous ores excluding gold	10 per cent. *ad valorem*
(*h*) China-clay or kaolin	75 cents per ton
(*i*) Potash-felspar or soda-felspar intended for use as a flux or a glaze	2½ per cent. *ad valorem*
(*j*) China-stone	2½ ,, ,,

IV.—MISCELLANEOUS.

[(*i*) *Perak, Selangor and Negri Sembilan only.*]

Description of goods.	Duty.
(*a*) Blachan	50 cents per pikul
(*b*) Fish, dried and salted	10 per cent. *ad valorem*
(*c*) Fish maws, fish refuse, ikan gelama, prawns (dried)	10 ,, ,,
(*d*) Oysters, fresh	$5 per pikul
(*e*) Oysters, dried, mother-of-pearl shell, beche-de-mer and sharks' fins	10 per cent. *ad valorem*
(*f*) Horns, tanned skins, raw or dressed hides, bones, and tallow	10 ,, ,,

[(*ii*) *Pahang only.*]

Description of goods.	Duty.
(*a*) Fish dried –	
Class A (i) Sharks' fins ...	$1.50 per pikul
„ A (ii) Tenggiri, ikan merah, kachang, selor, bileh, bawal, talang	.75 „
„ B Selor kuning	.60 „
„ C Pelata, gelama, selor puchat, lema ...	.50 „
„ D Kembong, Khe'kheh, selayang	.40 „
„ E Tamban, udang, blachan, ikan yu	.30 „
„ F Rampai, layor, pari, duri, bakan, buan and all other fish not mentioned above ...	.15 „
(*b*) Oysters, dried, mother-of-pearl shell and beche-de-mer	10 per cent. *ad valorem*
(*c*) Horns, tanned skins, raw or dressed hides, bones, and tallow	10 „ „

[(*iii*) *All States.*]

Description of goods.	Duty.
Elephants	20 per cent. *ad valorem*

EXCISE DUTIES.

Chinese samsu including medicated samsu	$9 per proof gallon
Other intoxicating liquors	$11 „ „
All intoxicating liquors manufactured in the Federated Malay States by the Nipah Distilleries of Malaya Limited	$9 „ „

Matches :

Containers in which there are—

		A.	B.
(i) not more than 10 matches ...	Per 100 containers	9 cents	8 cents
(ii) more than 10 but not more than 20 matches	„ „	18 „	16 „
(iii) more than 20 but not more than 50 matches	„ „	45 „	40 „
For every additional 25 matches or part of 25 matches over 50 in a container: a duty additional to duty under (iii)	„ „	22½ „	20 „

The rates in column "A" apply where both the matches and the containers are made from imported timber.

The rates in column "B" apply where both the matches and the containers are made from local timber.

APPENDIX F.

LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES.

	Cost. $ c.	Where obtainable.
Census Report, British Malaya, 1931	5 00	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Handbook to British Malaya	1 50	Malayan Information Agency, 57, Charing Cross, London; Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
The Oil Palm in Malaya	2 00	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
An Outline of Malayan Agriculture	3 00	Malayan Information Agency, 57, Charing Cross, London, and Department of Agriculture, Kuala Lumpur, Federated Malay States.
Federated Malay States Law for Planters	1 60	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Treaties and Engagements affecting the Malay States and Borneo	3 50	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Geology of Malayan Ore Deposits	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Geology of Malaya	8 00	Director, Geological Survey, Batu Gajah, Federated Malay States, and Messrs. Macmillan and Co., Ltd., London.
Mining in Malaya	Free	Malayan Information Agency, 57, Charing Cross, London.

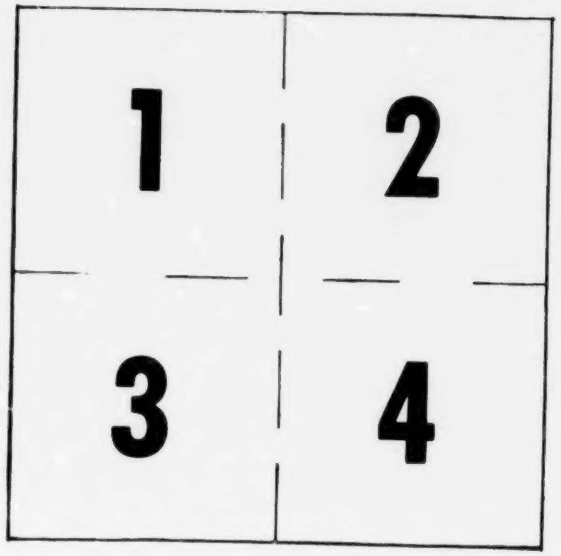
APPENDIX F—(*cont.*)

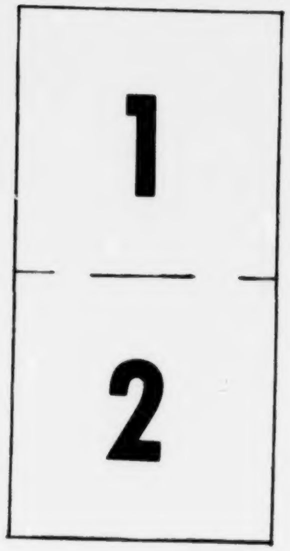
LIST OF PUBLICATIONS OF GENERAL INTEREST RELATING TO FEDERATED MALAY STATES—(*cont.*).

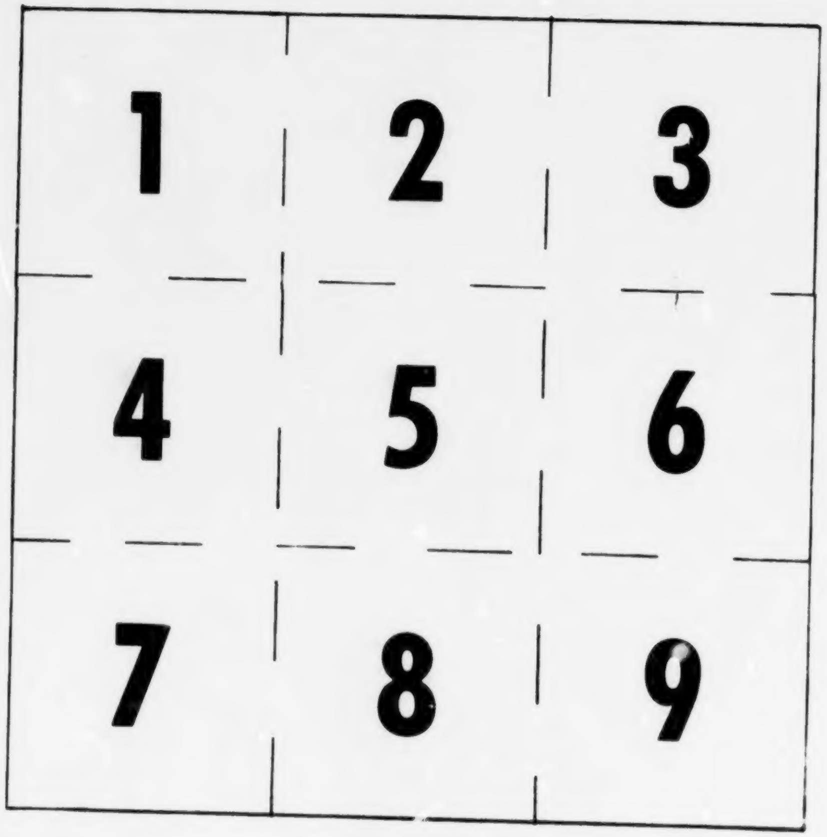
	Cost. $ c.		Where obtainable.
Fisheries of British Malaya ...	5 00	...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Commercial Timber Trees of the Malay Peninsula	5 00	...	Adviser on Forestry, Malay States, Kuala Lumpur.
Report on the Wild Life Commission (Three volumes) ...	12 00	...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Malayan Year Book	1 50	...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Rubber Statistics Handbook ...	1 50	...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Schedule of Import, Export and Excise Duties, Malaya ...	50	...	Government Printer, Singapore, and Messrs. Kelly and Walsh, Ltd., Singapore.
Mui Tsai in Hong Kong and Malaya, Report of Commission	2 50	...	Messrs. Kelly and Walsh, Ltd., Singapore.
Manual of Taxes, Licences, Duties, Fees, etc.	1 00	...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Dictionary of the Economic Products of the Malay Peninsula (two volumes)	13 00	...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
A Dictionary of Malayan Medicine by J. D. Gimlette ...	3 00	...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.
Papers on Malay Subjects ...	1 00	...	Printing Department, Kuala Lumpur, Federated Malay States, and Messrs. Kelly and Walsh, Ltd., Singapore.

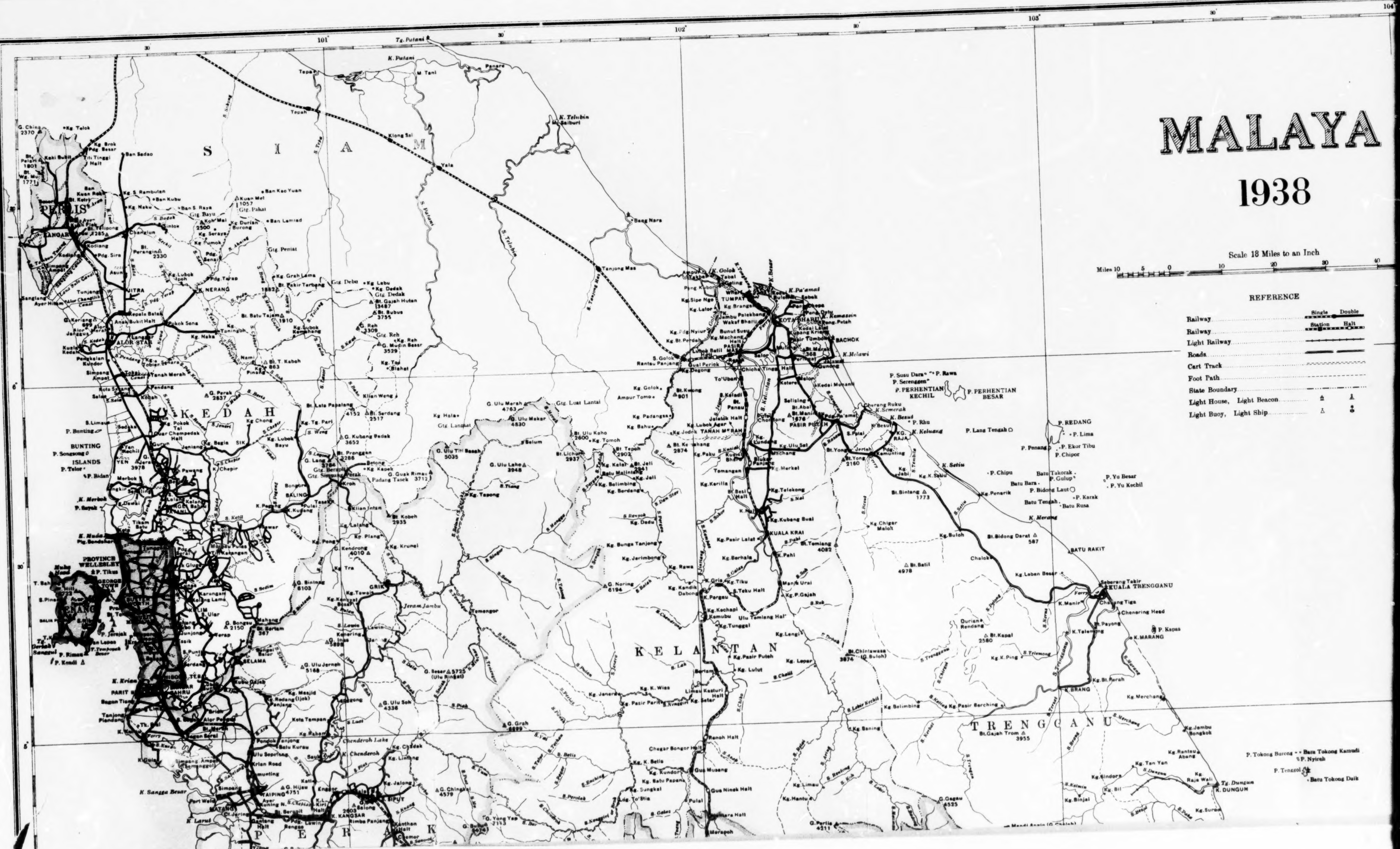
Federated Malay States Government Press.

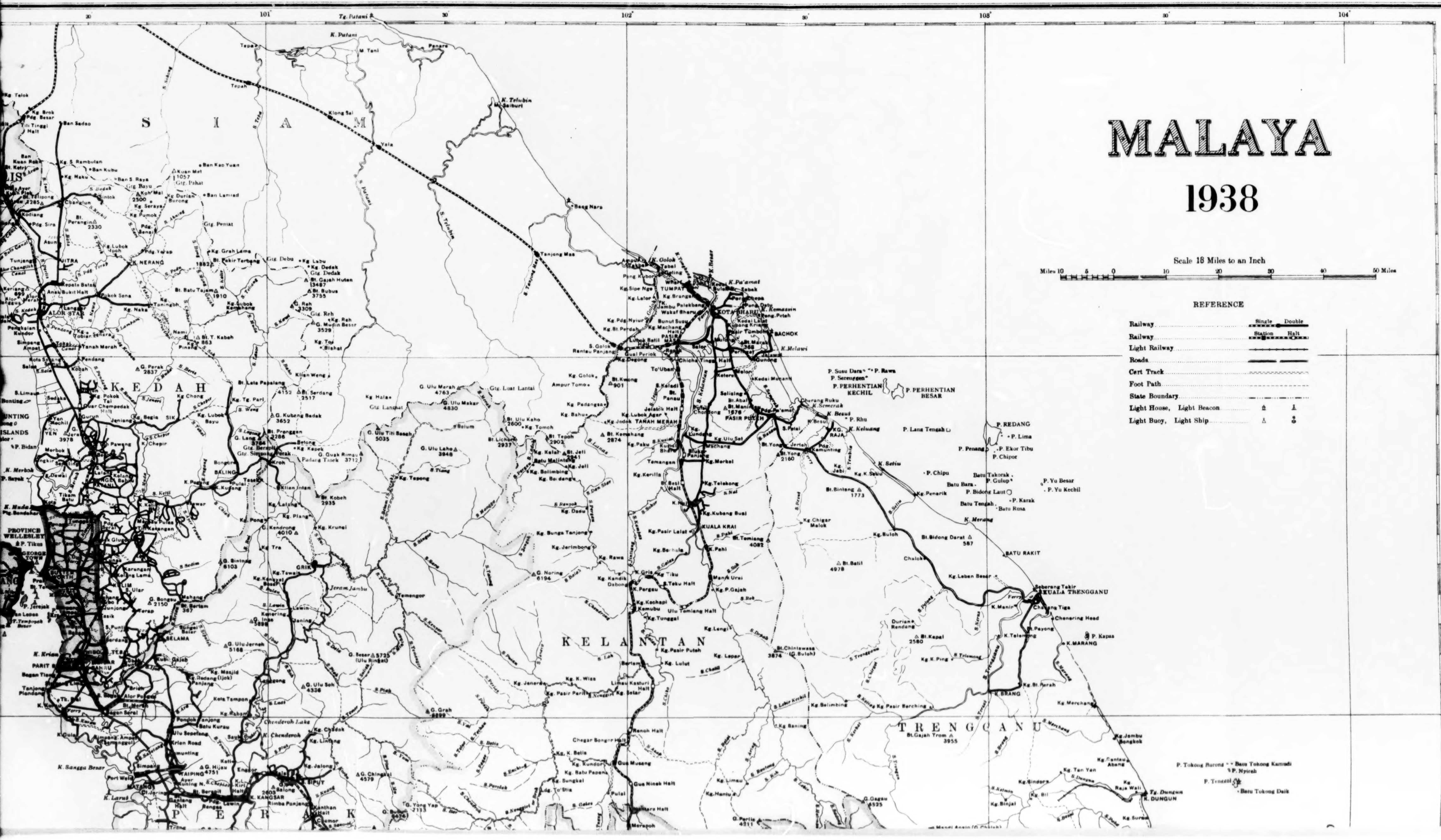
Maps on this order too large to be entirely included in one exposure are filmed clockwise beginning in the upper left hand corner, left to right and top to bottom as many frames as required. The following diagrams illustrate the method.







MALAYA
1938
Scale 18 Miles to an Inch
Miles 10 5 0 10 20 30 40
REFERENCE
Railway Single Double
Railway Station Halt
Light Railway
Roads
Cart Track
Foot Path
State Boundary
Light House, Light Beacon
Light Buoy, Light Ship
101°
102°
103°
104°
6°
5°
S I A M
PERLIS
KANGAR
KEDAH
ALOR STAR
PROVINCE WELLESLEY
PENANG
GEORGE TOWN
BUTTERWORTH
KELANTAN
KOTA BHARU
TUMPAT
BACHOK
PASIR PUTEH
KUALA KRAI
TANAH MERAH
TRENGGANU
KUALA TRENGGANU
K. DUNGUN
PERAK
TAIPING
K. KANGSAR
GRIK
Tg. Patani
Yala
Tepah
Klong Sai
Tanjong Mas
Bang Nara
K. Telubin
Saiburi
K. Besut
K. Marang
P. PERHENTIAN KECHIL
P. PERHENTIAN BESAR
P. REDANG
P. Kapas
P. Tenggol
BUNTING ISLANDS
Kroh
Baling
Chenderoh Lake
Jeram Jambu
Gua Musang
Bt. Kapal 2560
Bt. Gajah Trom 3955
Bt. Bidong Derat 587
Bt. Batil 4978
G. Noring 6194
G. Bintang 6103
G. Ulu Merah 4763
Chenering Head
BATU RAKIT


MALAYA
1938
Scale 16 Miles to an Inch
Miles 10 5 0 10 20 30 40 50 Miles
REFERENCE
Railway Single Double
Railway Station Halt
Light Railway
Roads
Cart Track
Foot Path
State Boundary
Light House, Light Beacon
Light Buoy, Light Ship
101°
102°
103°
104°
30'
S I A M
K E D A H
K E L A N T A N
T R E N G G A N U
P E R A K
PROVINCE WELLESLEY
ALOR STAR
KOTA BHARU
KUALA TRENGGANU
KUALA KRAI
PASIR PUTEH
TUMPAT
BACHOK
K. Patani
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Tanjong Mas
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BALING
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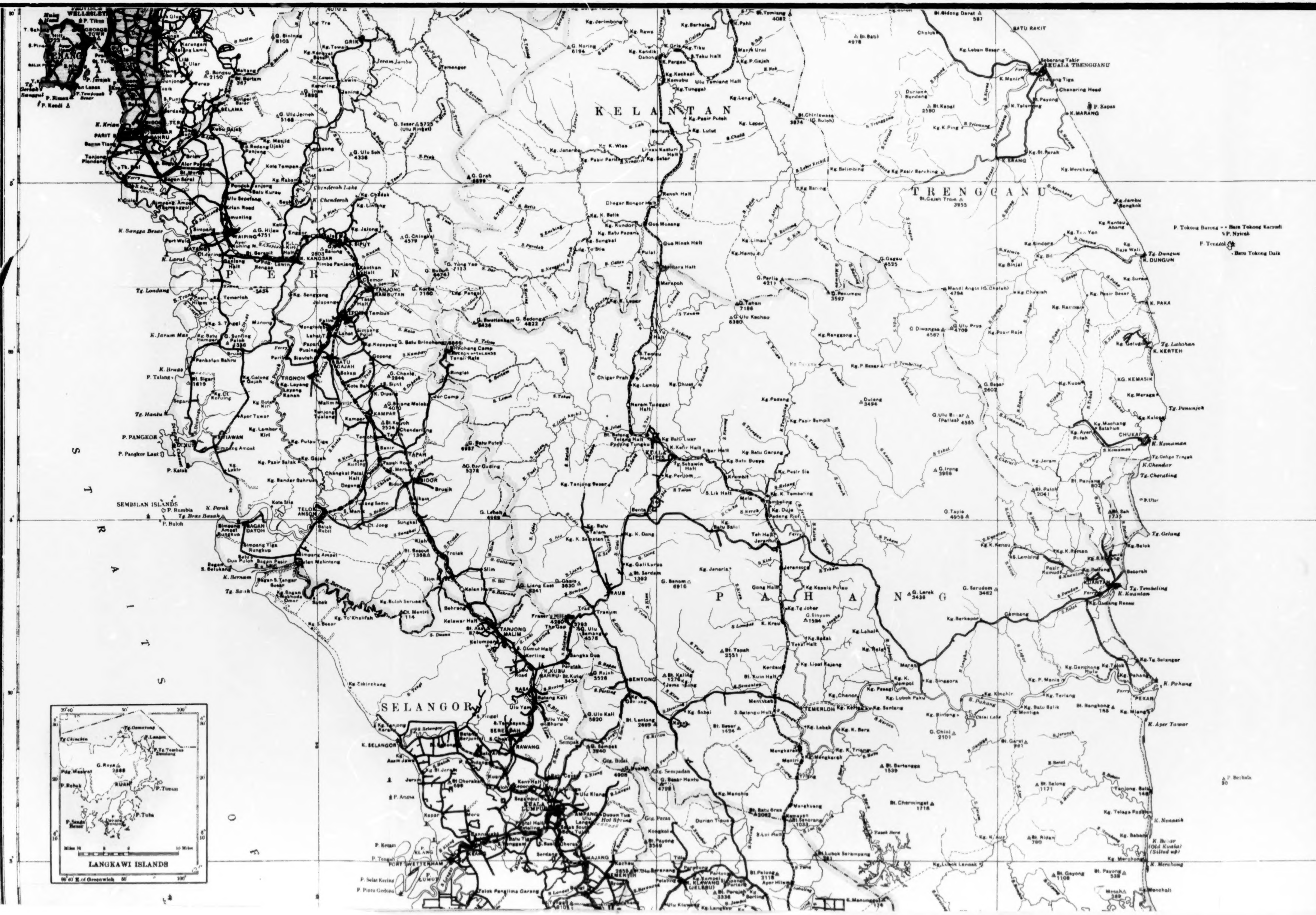
K E L A N T A N
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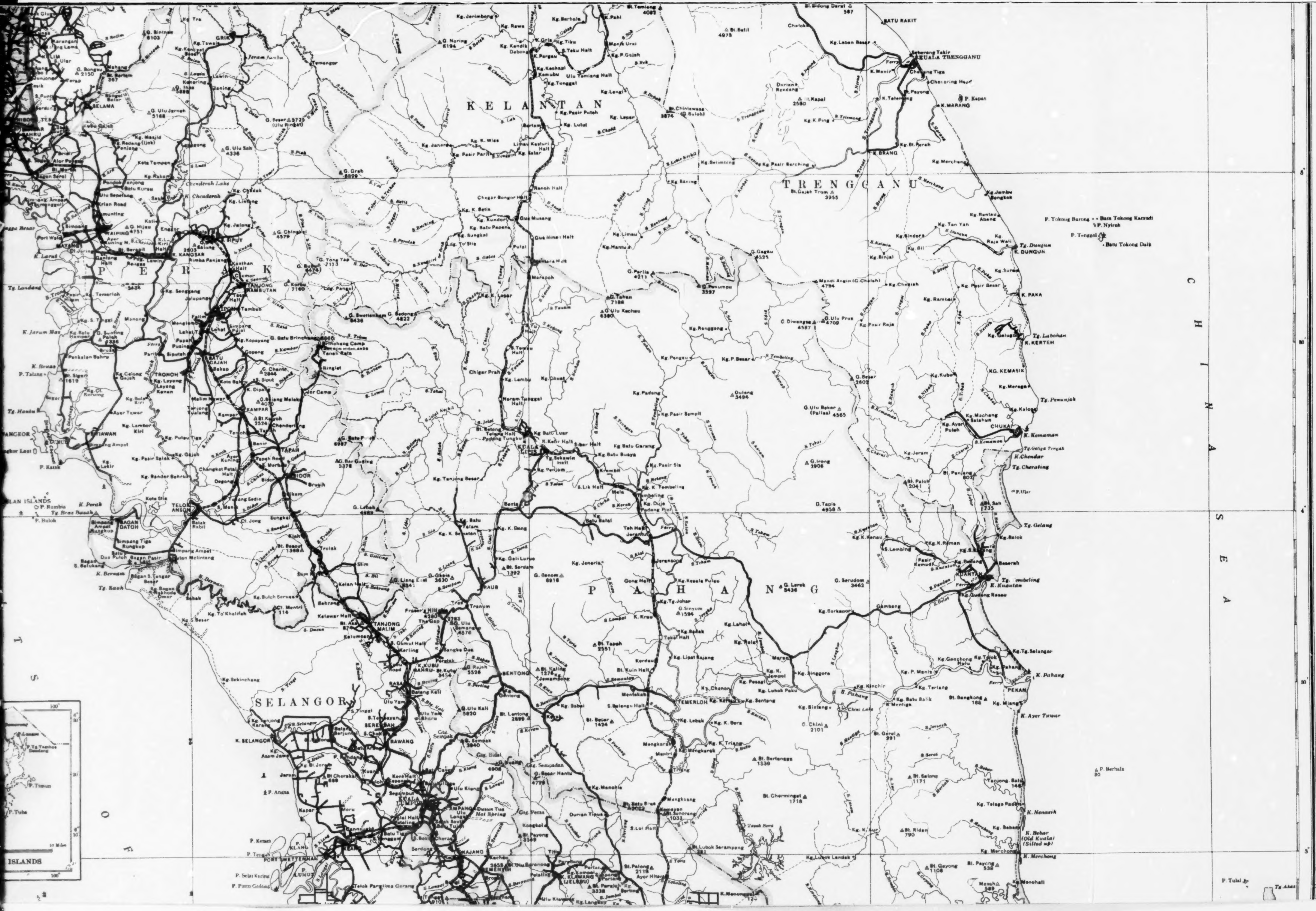
P E R A K
P A H A N G
SELANGOR
S T R A I T S O F
PENANG
GEORGE TOWN
PROVINCE WELLESLEY
TAIPING
K. KANGSAR
IPOH
TELOK ANSON
BATU GAJAH
KAMPAR
TAPAH
BIDOR
TANJONG MALIM
RAUB
BENTONG
KUALA LUMPUR
KLANG
PORT SWETTENHAM
KAJANG
KUALA TRENGGANU
K. DUNGUN
KUANTAN
PEKAN
TEMERLOH
K. SELANGOR
BAGAN DATOH
P. PANGKOR
SEMBILAN ISLANDS
Cameron Highlands
Fraser's Hill
Chenderoh Lake
Chini Lake
LANGKAWI ISLANDS
E. of Greenwich


KELANTAN
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PERAK
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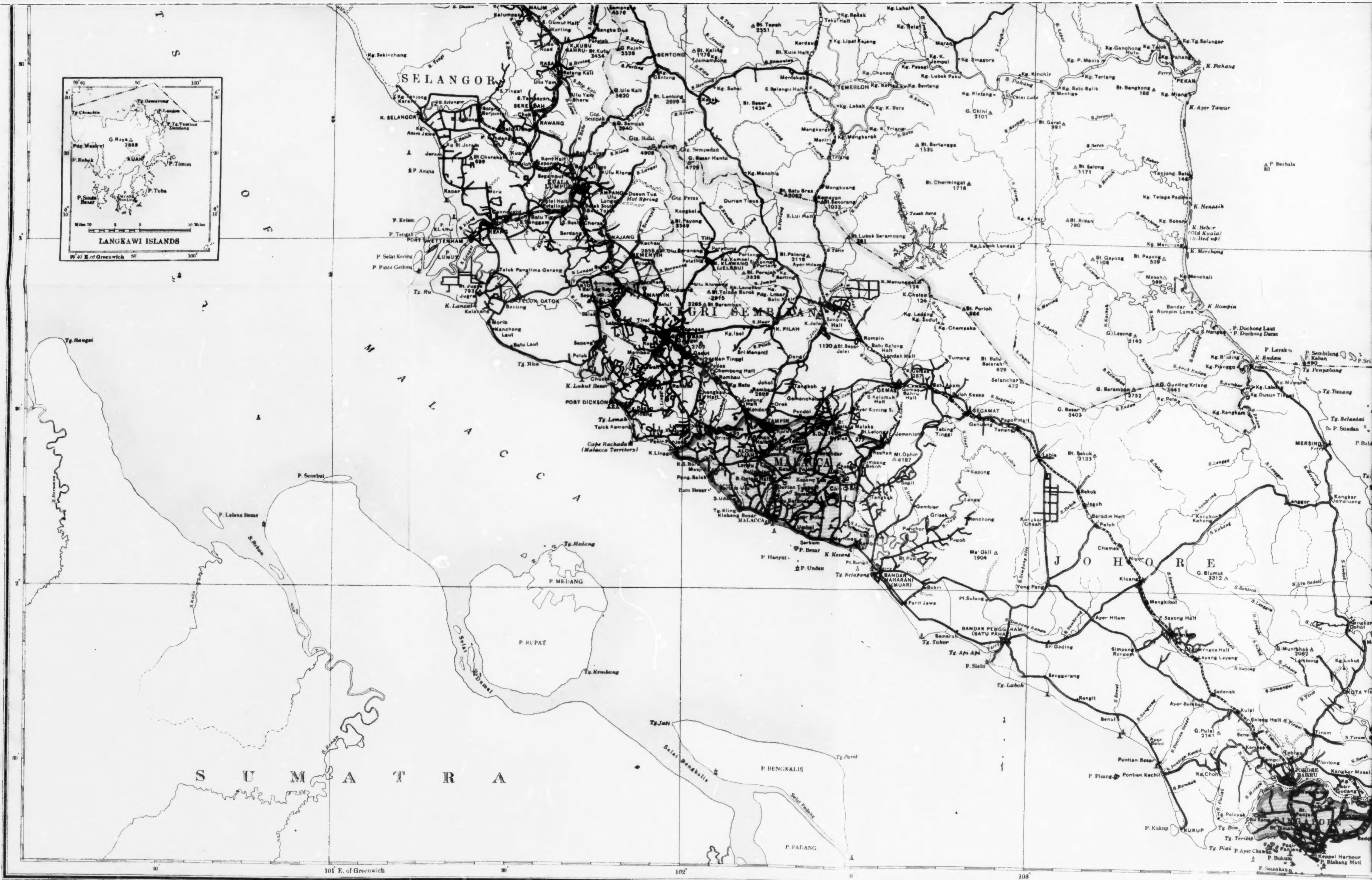
SELANGOR
CHINA SEA
ISLANDS
KUALA TRENGGANU
K. MARANG
K. DUNGUN
K. PAKA
K. KERTEH
KG. KEMASIK
CHUKAI
K. Kemaman
KUANTAN
PEKAN
K. Pahang
K. Merchong
TAIPING
K. KANGSAR
IPOH
TANJONG RAMBUTAN
BATU GAJAH
TRONOH
KAMPAR
TAPAH
TELOK ANSON
BAGAN DATOH
TANJONG MALIM
KUALA KUBU BAHRU
RAUB
BENTONG
KUALA LUMPUR
KLANG
PORT SWETTENHAM
KAJANG
TEMERLOH
K. SELANGOR
RAWANG
KUALA LIPIS
GRIK
SELAMA
Cameron Highlands
Fraser's Hill
Chenderoh Lake
Chini Lake
P. Kapas
P. Tenggol
P. Berhala
P. Tulai
Tg. Gelang
Tg. Tembeling
K. Kuantan
K. Bebar (Old Kuala) (Silted up)


SELANGOR
NEGRI SEMBILAN
MALACCA
JOHORE
PAHANG
S U M A T R A
S T R A I T S O F M A L A C C A
LANGKAWI ISLANDS
KUALA LUMPUR
PORT SWETTENHAM
PORT DICKSON
SEREMBAN
BENTONG
TEMERLOH
PEKAN
SEGAMAT
BANDAR MAHARANI (MUAR)
BANDAR PENGGARAM (BATU PAHAT)
MERSING
KLUANG
JOHORE BAHRU
SINGAPORE
Keppel Harbour
P. RUPAT
P. BENGKALIS
P. PADANG
P. MEDANG
Cape Rachado (Malacca Territory)
Mt. Ophir 4187
G. Blumut 3312
G. Pulai 2141
Tg. Bangsi
Selat Bengkalis
Selat Padang
101° E. of Greenwich
102°
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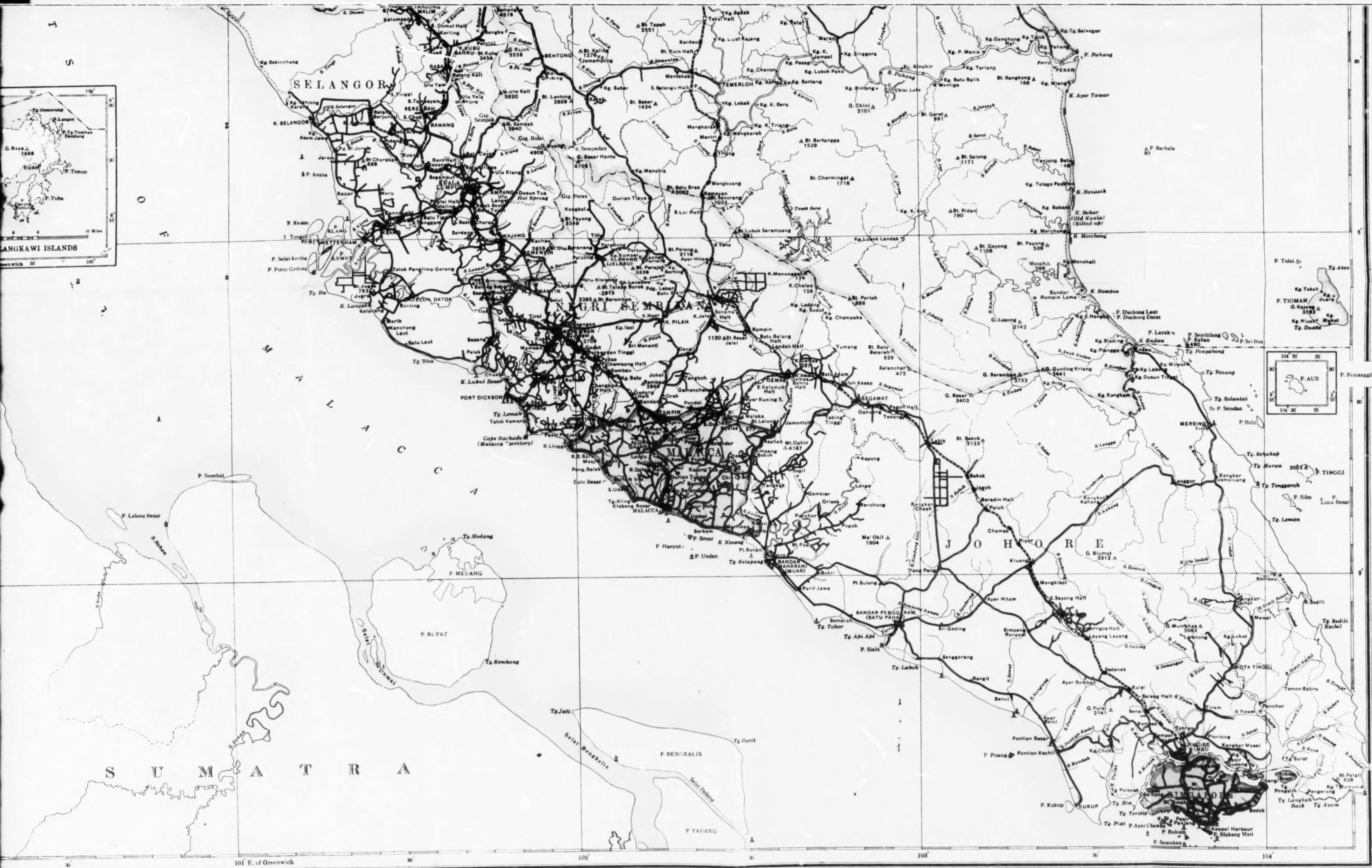
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SUMATRA
STRAITS OF MALACCA
K. SELANGOR
KLANG
PORT SWETTENHAM
KUALA LUMPUR
KAJANG
SEREMBAN
PORT DICKSON
Cape Rachado (Malacca Territory)
TAMPIN
MALACCA
K. PILAH
GEMAS
SEGAMAT
BANDAR MAHARANI (MUAR)
BANDAR PENGGARAM (BATU PAHAT)
KLUANG
KOTA TINGGI
JOHORE BAHRU
Keppel Harbour
Blakang Mati
MERSING
K. Endau
K. Rompin
K. Pahang
PEKAN
TEMERLOH
BENTONG
RAWANG
KUKUP
P. TIOMAN
P. AUR
P. TINGGI
P. RUPAT
P. MEDANG
P. BENGKALIS
P. PADANG
Selat Bengkalis
Mt. Ophir 4187
G. Besar 3403
G. Blumut 3312
G. Pulai 2141
101° E. of Greenwich
102°
103°
104°
30'

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